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Editorials

APOSTROPHE!

By

CHARLES J. WHALEN, M. D.

One hundred years! A century!
Three generations in the life of man.
But to the Infinite far less
Than the silent passing of a note against the wind.
We have struggled all of us. . . .
And greater yet the struggle always is—
For us today, for those to come and those who went before.

Like a cell dividing and redividing
Doubling through loss and losing through the gain.
That is the task *Hygeia* sets for us
That is the goal that Aesculapius sought
And Galen, too and every other brother of the twisted snakes.
Sleep peacefully, O our Hippocrates.
The oath you took, the oath we follow still
As men alone and men by cordons bound
Rests in our care, protected and secure.
The lamp you lit, that flame is guiding still
Our efforts and our lives. And neither age,
Nor youth flamboyant, nor weak indulgence of a lesser self
Has stopped, or will stop us come what will
As hundreds after hundreds of the years roll on.
For we are men of medicine, and as such
Can heal and help the suffering sons of God.
And we have faith in Him, and in our fellow man.

THE ILLINOIS STATE MEDICAL SOCIETY

Archives Era
(1840-1899)

In this centennial issue, we would look backward over one hundred years to watch the Illinois State Medical Society take form and to honor its accomplishments.

In 1817 even before Illinois attained statehood a few energetic physicians organized in Vincennes, Illinois Territory, a small medical library; and in the same year, a medical practice act appeared in the Laws of the Illinois Territory. Apparently ineffective, it doubtless provided the impetus for the "Act for the Establishment of Medical Societies," signed by Governor Bond on March 24, 1819, and the "Act Prescribing the Mode of Licensing Physicians" of January 15, 1825, both of which were soon repealed.

One result of the Act of 1819 was to interest young Dr. John Todd in medical organization, for he was president of the first district society set up under this act. Twenty years later we find the same Dr. John Todd instrumental in organizing the State Medical Society, founded in Springfield in 1840.

1840—Dr. Lucius Zeuch's investigations led to the discovery of the call for the State Society, sent out by the assembly of delegates meeting in Springfield on June 9, 1840, for the establishment of a society along ethical lines. The delegates, realizing that the Legislature, which had repealed the medical practice acts, was not sympathetic with their aims to improve the deplorable situation, couched the call to their fellow physicians throughout the state in the following exalted language:

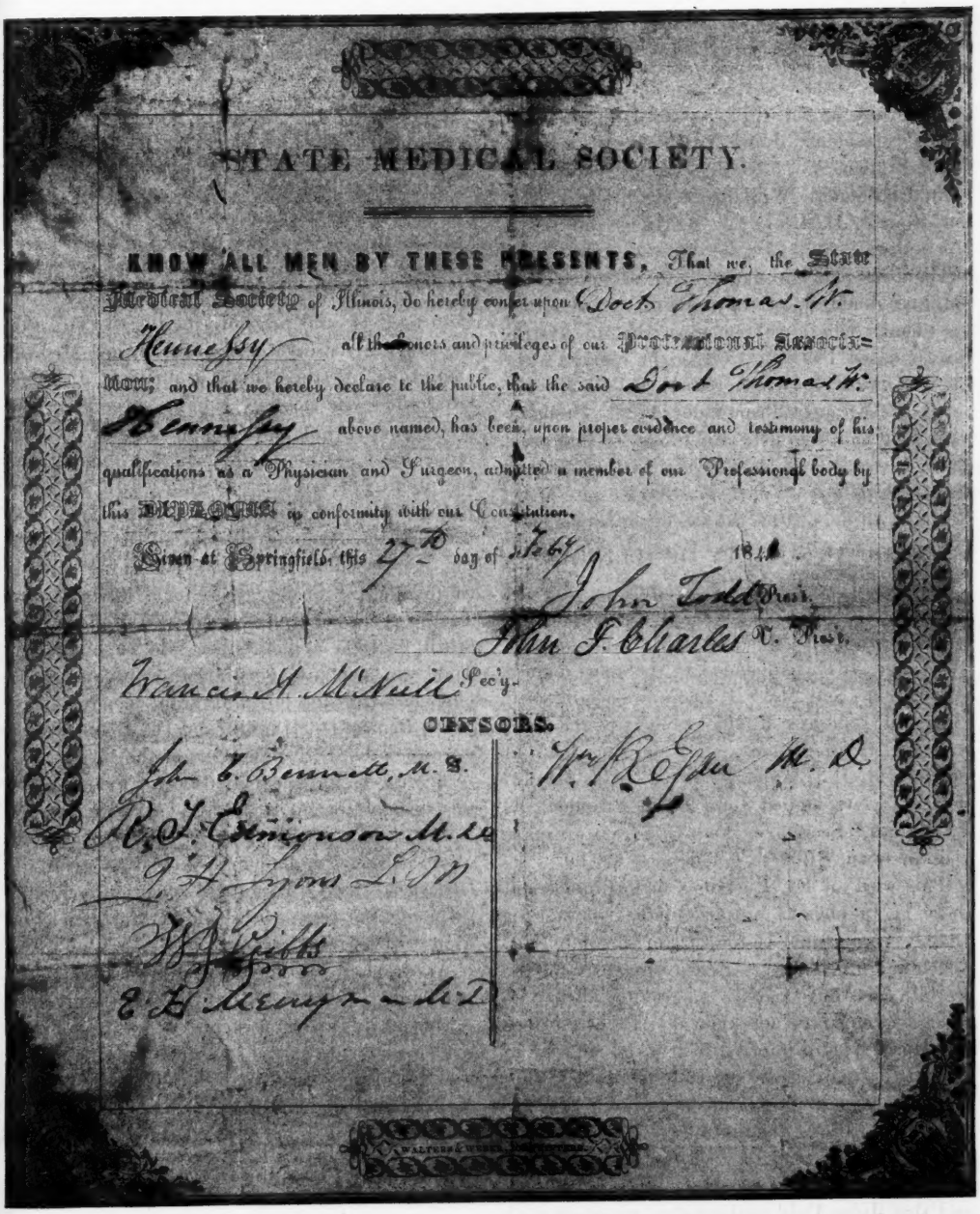
"MEDICAL CONVENTION OF ILLINOIS—

To the Medical Profession of Illinois:

"At a meeting of a number of the Physicians and Surgeons of the State of Illinois, convened in Springfield on the 9th of June, 1840, for the purpose of making preliminary arrangements for the organization of a State Medical Society, the undersigned were appointed a committee of correspondence and, as such, directed to address you on that subject. It was proposed that the medical men of the State of Illinois should assemble in convention at Springfield, on the first Monday of December next, and then and there proceed to the complete organization of the Illinois State Medical Society—the Convention to be composed of one or more delegates from each County in the State. This proposition was unanimously adopted; and we now call upon you to co-operate with us in the consummation of so desirable a result.

"Hitherto we have been like a vessel cast upon a boisterous ocean, without compass or helm; we have acted solitary and alone, without harmony or concert; but when we see hundreds of our fellow-citizens and worthy friends annually sacrificed by the empirical prescriptions of charlatan professors, on the altars of ignorance erected within the very temple of Aesculapius, by rude and unskillful hands, is it not time for us to act? We think so; not, however, by declaring war against mountebanks and uneducated pretenders to the art of healing within our borders, but by digesting a plan that shall be calculated in its legitimate operations to benefit the people, instruct the unlearned, inform ourselves and elevate the entire profession above all mercenary considerations to a station of superior mental, moral and medical excellence. Already do our forests groan under the axe-man's hand, and our prairies swarm with a busy, free and enterprising population; in agriculture and commerce, we are rapidly approximating the level of the oldest States; our citizens are rearing colleges and universities for mental culture; our Divines and Lawyers have already attained a high rank and an elevated standing; and shall medicine be wholly neglected? Is law of more consequence than medicine? or property more valuable than life? If not, let us not be behind our sister states in our efforts to improve our profession, and place it on a level with that of law. We ask not the protection of legal enactment to sustain us. We place ourselves before the public on our true merits, having a strong and abiding confidence in the wisdom of the people. All we require is a concerted effort, to enable us to diffuse true and useful medical knowledge and this we ask. It is due to the profession and to humanity, now, and in all time to come. We hope, then, to see a general attendance on the day proposed.

"J. C. Bennett of Fairfield
C. V. Dyer, Chicago
A. W. Bowen, Joliet, Will Co.
M. Helm, Springfield
E. H. Merryman, Springfield



STATE MEDICAL SOCIETY.

KNOW ALL MEN BY THESE PRESENTS, That we, the State Medical Society of Illinois, do hereby confer upon Doct. Thomas W. Hennessy all the honors and privileges of our Professional Association; and that we hereby declare to the public, that the said Dr. Thomas W. Hennessy above named, has been, upon proper evidence and testimony of his qualifications as a Physician and Surgeon, admitted a member of our Professional body by this DIPLOMA in conformity with our Constitution.

Given at Springfield, this 27th day of Dec. 1839

John Todd Pres.

John F. Charles V. Pres.

Francis A. McNeill Sec'y.

CENSORS.

John C. Bennett, M. D.

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W. S. Wallace, Springfield
D. Turney, Fairfield
C. F. Hughes, Rochester, Sangamon Co., secretary
I. S. Berry, Vandalia, Fayette Co.
B. K. Hart, Alton, Madison."

"Editors of all newspapers in Illinois were requested to publish the above once or more."—*Illinois State Journal,* Friday, June 19, 1840.

Whether a meeting was actually held on the first Monday in December we do not know. The next proof that the State Medical Society was an active organization lies in the document reproduced. Found in an ancient law-book at La Salle, Illinois, it is now in the possession of Dr. Charles Whalen, editor of the JOURNAL.

This interesting paper is a membership certificate in the "State Medical Society,' in nice form, printed as

a diploma, and issued "under the Constitution to Dr. Thomas W. Hennessey, of La Salle." It is dated Feb. 27, 1841, at Springfield, or nine years before the present Illinois State Medical Society came into existence.

Signatures on this diploma are those of "John Todd," president; John F. Charles, vice-president; Francis A. McNeill, secretary; "censors" John C. Bennett, William B. Egan, R. T. Edmondson, J. H. Lyons, W. J. Gibbs and E. H. Merryman.

The discrepancy in names of the secretary need not cast doubt upon the authenticity of either document. One must remember that the certificate is dated Feb. 27, 1841, eight months after the call was issued; moreover, C. F. Hughes acted as secretary throughout 1840. Probably a meeting had been held in January of that year. From *Items Relative to Early and Other Medical History of Illinois,* Vol. 1, Wm. O. Ensign, M.D., Rutland, Illinois, 1913, the following is taken:

MEDICAL SOCIETY OF ILLINOIS

Address delivered to the graduating class of Indiana Medical College at public commencement, February 18, 1847 by M. L. Knapp, M.D. —Chicago, 1847. Appended to the above named publication (N.W.M.&S.J. 9) find inside of cover "Fee Bill" "adopted by the members of the Medical Society of Illinois, at a meeting held in Springfield, Ill., January—1840." Also Resolution as to fees, signed John Todd, President, C. F. Hughes,* Secretary. Fees run from ordinary visit in town, $1.00 to gonorrhoea $10.00.

This work of Dr. Ensign is in longhand, and there is an obvious erasure under "January—1840," so we cannot be too sure of this date. Dr. Zeuch and others have searched diligently for the fee bill, but thus far with no results, so that its exact contents are not known. However, since Dr. Moses Knapp referred to it in his address to the graduating class of the Indiana Medical College, it must have been a model for its day.

The indications are that as soon as the actual convention was held, one of the first items on the order of business was the election of officers, and that John Todd continued as president with Francis McNeill as secretary.

According to information supplied to Dr. Zeuch by Dr. George H. Weaver of Chicago, there was sufficient enthusiasm displayed in the organization to keep it meeting annually until 1847. In that year a meeting was held in Springfield with Dr. John Todd acting as president and Dr. David Prince of Jacksonville as secretary. These officers may have continued for two more years.

Throughout the existence of the Society Dr. Todd was the motivating spirit. His experience in Edwardsville twenty years before had fitted him to assume the leadership of the new movement toward permanent organization of the practitioners of the state. One of the signers of the call in June 1840, president of the group from 1840 to 1847, and probably for the two succeeding years, a censor of the newly formed Medical Department of the Illinois College at Jacksonville, where he possibly taught surgery at the same time David Prince taught anatomy, possessor of the finest house in Springfield, member of the prominent Todd family into which Abraham Lincoln married, his influence must have been invaluable in keeping the Society together during its period of activity. When the Illinois State Medical Society took form in 1850, Dr. Todd was elected a member by invitation. At his death in 1865 a biographer said of him, "Dr. Todd was a man of good attainments and excellent character and left a fragrant memory."

Dr. Prince, Dr. Hughes, and Dr. Moses Knapp were the other active members of the 1840 group.

There is a simple explanation for the obviously incorrect statement in the first printing of the Constitution and By-Laws of the Illinois State Medical Society adopted in 1915 that gives the Ottawa Medico-Chirurgical Association credit for inspiring the convention held in Springfield on June 9, 1840.

As we shall see later the Ottawa society was not founded until 1849, and the only extant indication of its earlier existence is due to a proofreader's error occurring in an account of the proceedings of the Aesculapian Society of the Wabash Valley, published in the *Northwestern Medical and Surgical Journal* for November 1849. The article is headed:

> Proceedings of the Aesculapian Society at its annual session, held at Mt. Carmel, Ill., October 31, 1840

It recommends that the secretary enter into correspondence with the secretary of the Ottawa Medico-Chirurgical Society on the subject of appointing delegates to attend the Convention at Springfield when called. However the very next page continues with the record of proceedings of

*Later an organizer of Illinois State Medical Society in 1850.

the Aesculapian Society under the heading of Thursday morning, Nov. 1, 1849. Besides we know from its charter that the Society was incorporated in 1847.

1842—Whether or not the Society felt the need of legislative support for its program we do not know; but at any rate, in spite of previous discouragements along this line, in 1842 there was brought before the General Assembly "An Act to Incorporate the Illinois State Medical Society" and regulate the practice of medicine, which act was tabled.

1843—In 1843 there appears an act in the statutes assigning to parents or guardians the duty of reporting births to the county clerk; but this vestige of the act requiring registration of births and deaths, first found on the statutes in 1819, remained for a number of years the sole legislative stamp of approval for this much needed measure.

STEPS LEADING TO THE CONVENTION OF 1850

The Convention of 1850, which resulted in the formation of the Illinois State Medical Society, was the culmination of a series of attempts at medical organization begun in 1846.

The founding of Rush Medical College in 1843, the appearance of the ILLINOIS MEDICAL JOURNAL in 1844, the adoption of a National Code of Medical Ethics by the recently established National Medical Association—all gave impetus to the movement which resulted in four new local groups exerting an especial influence toward state organization. The Rock River Valley Medical Society, dating from 1846, the Lawrenceville Aesculapian Medical Society, incorporated in 1847, the Peoria District Medical Society, founded in 1848, and the Ottawa Medico-Chirurgical Society of 1849 comprised the list of new societies.

The fourth and last society to be mentioned occupies a peculiar position in regard to the State Convention of 1850. It was instrumental in initiating the Illinois State Medical Society, but supplied not one member to the Convention. The *Transactions* of the Illinois State Medical Society for 1895 give an interesting account of its origin and the part it played. "As an immediate successor to a medical society, instituted in 1847, and called the Medical Society of La Salle and Adjoining Counties, of which Dr. Joseph Stout was secretary, there was organized on January 1, 1849, in the city of Ottawa, the Ottawa Medico-Chirurgical Association."

The president of the association was Dr. Allen Howland. One of the first projects undertaken by the new society was the launching of a plea for a convention to be held in Springfield on the first day of January, 1850 for the purpose of organizing a State Medical Society.

The September 1849 issue of the *Northwestern Medical and Surgical Journal* carried an editorial comment as follows: "We owe an apology, which we cheerfully make—to the Secretary of the Ottawa Medico-Chirurgical Association for an unintentional omission to notice in our last number, their circular calling the attention of the profession of this state, to the importance of organizing a State Medical Society and calling a convention for the purpose at Springfield on the first of January next. We are happy to express our approval of, and co-operation in this project; but we doubt the propriety of the time appointed. The close of navigation at that time will have the effect of procuring but a meager attendance. —As the matter has been so long deferred, we would suggest that the convention be postponed until May, at which time we suppose a tolerably full attendance might be procured.—We cheerfully accord to our Ottawa friends the praise of being the first to move in a matter of so much interest and importance to the profession in Illinois."

The immediate results of the notice were to distinctly discredit the efforts of the Ottawa Society. This notice had been sent not only to prominent doctors and to medical societies and publications but to the secular press as well. As worded, it proved to be a veritable explosive. It is reported to have been "expressed in such language as to excite contempt and ridicule at the hands of the newspapers, whose caustic criticisms resulted in the appointment by the local society of a committee to prepare resolutions disavowing the officiousness of the secretary. The report was a severe rebuke of the effusive style of the author, whose wordy effort they characterized as "bombastic literary nonsense."

In spite of the secretary's wounded pride and the creation of much local ill-feeling, the Society received a number of encouraging replies agreeing on the necessity for a state society. As a consequence, the call for a convention at Spring-

field was drawn up and sent to the *Northwestern Medical and Surgical Journal* for publication.

Official Call for a State Medical Convention

Office of the Secretary, of the

Ottawa Medico-Chirurgical Association

18th December, A. D., 1849

Editors Northwestern Medical and Surgical Journal:

GENTLEMEN:—At a regular meeting of the "Ottawa Medico-Chirurgical Association," held at the rooms thereof, on the evening of Monday, the 17th inst., Dr. Edward A. Guilbert offered the following preamble and resolutions, viz:

Whereas, it has been deemed advisable by sundry medical gentlemen, that an *official* call for a Convention of Physicians to assemble at Springfield, Illinois, at some future time, for the purpose of forming a State Academy of Medicine, should be immediately made, and *whereas,* it is esteemed very proper for those who have originated the movement, to make said *call,* Now therefore, be it

Resolved, That the "Ottawa Medico-Chirurgical Association" respectfully, and earnestly recommend that a State Medical Convention, convene at the Capital of the State, on the *first Tuesday* in June, A. D., 1850 for the purpose of forming a State Medical Association.

Resolved, That this (the Ottawa Medico-Chirurgical Association do hereby call such a Convention, and that these preamble and resolutions be signed by the President and Secretary of this body, and transmitted to the "Northwestern Medical and Surgical Journal," for publication.

On motion of Dr. D. D. Morrison, it was further

Resolved, That a Committee of Conference, consisting of three members of this Association, be appointed to correspond with the Physicians of Springfield, in reference to the arrangements incident to the convocation of said Convention.

These resolutions were adopted, and Drs. D. D. Morrison, Edward A. Guilbert, and Jonathan Pierson were appointed the committee proposed in the last resolution.

[Signed,]

A. H. Howland, M. D.,
President.

Edward A. Guilbert, M. D.,
Secretary.

The call contains one of the proofreader's errors apologized for by the editor, for "Morrison" should read "Thompson."

Immediately following its publication, the *Northwestern Medical and Surgical Journal* gave its official blessing to the enterprise over the initial "E," known to represent Dr. John Evans. In urging the importance of attendance, he did not fail to point out that at this season the country was generally healthy, the roads were good and the weather pleasant.

EARLY MEDICAL CONDITIONS IN ILLINOIS

Some of the difficulties and problems of the practitioner of the first half of the century we have already noted. He dealt for the most part with an unfriendly legislature in attempting to regulate the practice of medicine and subdue quackery and "irregulars" of the variety who called themselves practitioners on the basis of a Thomsonian certificate. Anyone who could afford to pay for it was permitted to prescribe for the sick without any medical study.

The very early practitioner made his rounds on foot or horseback, braving the rigors of winter in a bear-fur suit, cap and moccasins. He carried his medicines in a fur sack or wrapped up in a cloth and stowed in a corner of his saddlebags. Usually his bills were paid in trade.

In *Early Medical Chicago,* Dr. James Nevins Hyde relates that the spring of 1834 saw a perfect flood of immigration pouring in, and with it a sprinkling of doctors. "Prior to 1840, nine-tenths of all the physicians who had located themselves in this region, had done so with reference to pursuing agriculture, and with the avowed intention of abandoning medical practice; most of whom, either from the necessities of the case, or from finding more truth than poetry in pounding out rails, resumed their profession and divided their attention between farming and medicine."

About 1850 a change came, and until the end of the century we have the "gentleman" doctor. People began to wear "store clothes"; the doctor commenced to dress accordingly. It is related that in 1865 Dr. Wm. Lott Goodell wore a black broadcloth suit, a dress silk hat and morocco boots costing $17. He had a fur buffalo great overcoat for calls in wintry blasts.

Transportation was slow. There were few roads, and during the winter season rivers were closed to navigation. Herein lay one of the pri-

mary obstacles to early medical organization, perhaps the next most important being the fact that not many members of the profession could afford to travel or take the necessary time consumed in attending a medical convention.

At the 1889 meeting of the Illinois State Medical Society in Jacksonville, Dr. N. S. Davis related, "I started out from Chicago to attend that meeting here (he refers to the second session of the Society in 1852), and what kind of a journey did I have? I did not start from Chicago last night and be here this morning to breakfast. I had a journey by stage of one day and a good part of a night, then a ride on the Illinois River, then another piece of a ride on the construction train of a railroad on top of a load of ties, part way to Jacksonville, and I think we came into the city on a stage coach."

An entertaining sidelight on the early district society meeting is furnished by the reminiscences of the North Central Illinois Medical Association by Dr. Henry Zeising of Peru. He recounts how he and Dr. Woodbridge of La Salle hired the best span of horses and finest rig in town to attend a meeting in Wenona in the fall of 1878. On their arrival they found the society in session on the second floor of a large brick house. Comes this dramatic interruption, "About four o'clock the president adjourned the meeting—he had to milk the cow before dark."

During the early days the doctor had only a limited number of diseases to treat and these he cured (or failed to cure) with an even more limited supply of medicines, which he administered in "heroic" doses. Quinine, jalap, and calomel, with the possible addition of opium, were his usual stock in trade. Malaria and pneumonia were two of the diseases most frequently encountered, the former covering the terms ague, "shakes," "chills," intermittent or remittent typhoid and typhus, or "autumnal fever." Frequent mention is made of ophthalmia, which was treated with sulphate of zinc, sugar of lead, blue vitriol or nitrate of silver.

In 1883 Dr. John Murphy of Peoria wrote: "When I first settled in Peoria some thirty-five years ago (about 1848) the entire prairie was saturated with malaria. In fact, the entire area of central Illinois was a gigantic emporium of malaria."

Most of the surgical cases arose from accidents occurring in the woods, broken bones incurred by the felling of trees, injuries sustained from a glancing ax or falls received in the process of breaking horses.

Burns from kerosene lamps were another source of doctors' fees.

One of the chief difficulties encountered by the experimentally minded physician was in obtaining cadavers for dissection. As early as 1825 the practice of "body-snatching" must have been a real source of annoyance to the laity, for on January 3 of that year we find the Legislature passing the "Act to Prevent the Disinterment of the Dead." In those days before the advent of medical colleges the only means of obtaining bodies for anatomical purposes was to buy one outright or steal it—and stealing it was usually the simpler way.

Herein arose the greatest problem confronting the first medical colleges, and it proved the Waterloo of several. A letter from H. Paschal to the Illinois State Medical Society, dated September 22, 1924, relates the event which brought to a sudden and untimely end the Franklin Medical College established in St. Charles in 1842. On April 19, 1849 one John Rood, student, having stolen the body of a prominent young woman from a Sycamore cemetery and hidden it on a ledge near the college, a riot took place and the college was mobbed. John Rood was shot through the head and Dr. G. W. Richards was likewise wounded. The latter fled the town, and that was the end of Franklin Medical College.

At about the same time the Illinois College Medical School, at which the first lectures had been given in November 1843, closed its doors, partly, it is said, because Dr. David Prince refused to teach anatomy without cadavers, and these were so difficult to procure.

The repercussions of the St. Charles affair were felt by Rush Medical College, who had to weather a wave of unpopularity as a result.

In the *History of Medical Practice in Illinois*, Dr. Zeuch says, "That Rush Medical College eschewed the common practice of body stealing for dissecting purposes on account of the antipathy of the public toward the use of bodies for that purpose is beyond the credulity of unbiased historic opinion in view of the demand for material. The editor remembers a story (told to him by his mother) which seems significant. It was to the effect that at the funeral services, in 1878, of her father, who had shortly before his

death married again, and, as they thought, had died under suspicious circumstances, were three strange men. These strangers excited suspicion when they inquired of some friends where the body was to be taken for interment. When they departed in their buggy a son of the deceased followed the vehicle upon his bicycle and found that their destination was Rush Medical College!"

The matter of dissections was brought up time and again in the Illinois State Medical Society and was not finally settled until legislation was secured in 1887. Much dissatisfaction was felt even then, and we find the issue cropping out at least a decade later.

CONVENTION OF 1850

1850—On Tuesday, June 4, 1850 there assembled in the State Library Room at Springfield 15, or possibly 16, delegates of the 29 elected members of the Society. Dr. Boal listed those present as Samuel Thompson, Albion; William B. Herrick, Chicago; James V. Z. Blaney, Chicago; Edwin G. Meek, Chicago; John A. Halderman, Carlinville; Robert Boal, Lacon; L. G. Thompson, Lacon; Rudolphus Rouse, Peoria; F. A. McNeill, Peoria; E. S. Cooper, Peoria; A. G. Henry, Springfield; M. Helm, Springfield; S. A. Paddock, Princeton. These members were joined on Wednesday by Doctors B. F. Stephenson of Menard County and Dr. Jayne of Springfield. Dr. Edward Roe of Jacksonville may possibly have been a late arrival.

Transacting most of the business as a Committee of the Whole, the delegates elected officers, adopted a Constitution, By-Laws and Code of Ethics.

A list of the first officers of the Illinois State Medical Association follows:

President—William Herrick.
Vice-president—Rudolphus Rouse.
Vice-president—A. G. Henry.
Secretary—E. G. Meek.
Secretary—S. A. Paddock.
Treasurer—John A. Halderman.

The Constitution adopted required but four printed pages and covered but seven points: the sections were headed Title of the Society, Members, Meetings, Officers, Standing Committees, Funds and Appropriations, Provision for Amendments.

Physicians were to hold their appointment to membership either as delegates from local institutions, as members by invitation or as permanent members.

The meetings were to be held on the first Tuesday in June, never in the same place twice in succession.

Standing committees were named as follows: Arrangements, Practical Medicine, Surgery, Obstetrics, Drugs and Medicine, Publication.

Funds were to be raised for current expenses only by an equal assessment upon each of the members.

The Code of Ethics adopted was that of the National Medical Association, with two minor changes in wording.

It is interesting that one of the first acts of the new society was to appoint a committee of three to memorialize the Legislature for a bill to register births, deaths and marriages.

An initiation fee of $2 was instituted, the sale of patent or secret *nostrums* discouraged and organization of local medical societies resolved on.

The *Northwestern Medical and Surgical Journal* was to have permission to prepare from the minutes and publish an abstract of the proceedings. It was also specifically stated that the committee was to keep meteorological records.

The history of the Society is continued in the *Transactions*.

1851—Peoria. The first delegates were elected from the Illinois State Medical Society to attend the forthcoming convention of the National Medical Association.

It was written in the *Transactions* that during the whole session there was manifest the best feeling between the members in the discussion of the various topics.

1852—Jacksonville. In the second year of its existence the membership of the Society had jumped to 77. In his address, Dr. Rudolphus Rouse, the new president, mentioned that "while not so much interest is shown in the Society as some might wish, however it is increasing."

The Society adopted an amendment in regard to membership providing that delegates should receive their appointment from permanently organized medical societies, from medical colleges, hospitals, lunatic asylums and other permanently organized institutions of good standing.

A resolution was adopted that since an effort was being made to induce the Legislature to appropriate college and seminary funds, either by establishing a state university or by distributing

funds to colleges already established, all regularly organized medical colleges should be placed on the same footing with the best literary colleges in any distribution or appropriation.

1853—Chicago. At this meeting it was resolved that every motion should be made in writing and handed to the secretary.

The secretary of each county or local society was requested to report on the most prevalent diseases of his district and forward the same to the chairman of the Committee on Practical Medicine at least one month before the annual meeting.

1854—La Salle. Proof that the newly formed society was having to battle indifference or opposition is shown by the fact that Dr. Davis expressed surprise and regret that so many of the standing committees for the past year had neglected their duty, and in the suggestion by Dr. Brainard that other members of the profession were not cooperating. The Society had but 59 paid-up members.

Republication of the Constitution and Code of Ethics was authorized.

A committee was appointed to obtain the names of all regular members of the profession throughout the state, with their addresses, to encourage the formation of county societies.

The Society resolved that before a candidate was nominated for permanent membership, it must be ascertained that he was not interested in the sale of patent medicines or *nostrums*. Also, Illinois physicians and distinguished physicians from other states might be elected honorary members by unanimous vote.

1855—Bloomington. It was decided that publication of a report did not mean the adoption by the Society of the views expressed therein.

The Legislature was to be petitioned with regard to additional provision for the insane and establishment of an institution for idiots.

In the matter of representation in the National Medical Association, if a member were unable to act, the president might appoint another member, and if a vacancy occurred at the meeting, the delegates might fill it with anyone present. It was this ruling which was later responsible for the difficulty in seating the first woman delegates to the A.M.A.

Dr. Davis called attention to the fact that at the end of five years there were as many members in attendance as the Medical Society of New York had.

1856—Vandalia. Dr. Thompson made a plea for accurate recording of symptoms and treatment which gives some idea of the difficulty in obtaining statistics in those times. "But it is careful observations recorded, not remembered, that are needed as contributions to medical science. It is very true that it is very difficult for a physician, in daily, laborious, and extensive practice, to examine carefully, amid all the noises and confusion of a country log-cabin, with the cooking, and creaking, and squealing around, and as difficult to record such observations when made." Another difficulty brought out in the report is that "there is no agreement among writers as to what shall be called typhoid fever."

From this date a permanent secretary was to be chosen to keep all records, books and papers of the Society, as well as an assistant secretary to be elected annually from the place where the next succeeding meeting was to be held.

1857—Chicago. The state of the treasury at this time may be judged from the fact that out of 122 members, 31 had paid their dues. For this reason most of the matter designed for the *Transactions* was first inserted in the *Northwestern Medical and Surgical Journal.*

1858—Rockford. A resolution was adopted to the effect that "the hireling system is not compatible with the true interests of the profession; and no member of the Society shall be allowed to hire his services by the month or year, to families or individuals."

If papers were over 10 pages foolscape in length, only a synoptical abstract was to be read.

All the back numbers of the *Transactions* were to be procured and bound.

1859—Decatur. Probably as a concession to the invited guests—all clergymen favorable to regular medicine—it was voted that in the future all meetings of the Society were to be opened by prayer. To the guests were addressed the remarks of Dr. H. A. Johnson on "Human Dissection," in which he answered objections to the study of practical anatomy, hoping thereby to gain public approval for the dissection law.

For the first time the Society took cognizance of public health by appointing a Committee on Hygiene and Sewerage of Cities.

Because there were only 58 paying members, it was decided to omit the names of non-paying members from the *Transactions* if dues were not in by September 1.

1860—Paris. Henceforth the time and place of each annual meeting was to depend on the vote of the Society. Permanent members were not to lose their membership by moving out of the state.

Conditions of the A.M.A. are reflected in a resolution to the effect that the Society would use its influence to change the custom of electing officers of the National Medical Association from the place where the meeting was held, and encourage their election on merit.

1861-1862—No meetings, due to the absence of so many members in the Civil War.

1863—Jacksonville. As a sign of the times, the report of the Committee on Surgery was divided into civil and military.

A note of humor appears in the resolution that Prof. Davis, if it were not incompatible with his other duties, be requested to write an essay upon the "Deleterious Effects of the Use of Tobacco upon the Human System, and especially upon the example and bad taste of the members of our profession who habitually use it.

1864—Chicago. In order that the *Transactions* might not be delayed in coming out, all reports of committees and volunteer communications must be complete and delivered to the permanent secretary before the first of July succeeding the meeting at which they were read.

Two problems were considered: fees of medical witnesses in courts of law, and reasonable compensation for surgeons and assistant surgeons in the U. S. army.

1865—Bloomington. The Society passed a series of resolutions mourning the loss of President Lincoln and commending his example to the youth of the land.

1866—Decatur. It was recorded in the minutes that this meeting had the largest attendance of any in its 16 years of existence, with 261 members on its roll.

However, the financial affairs of the Society were not encouraging. Dr. N. S. Davis, as permanent secretary, suggested publishing the proceedings of the Society in the *Chicago Medical Journal* or the *Chicago Medical Examiner*. The committee to whom the matter was referred demurred, recommending that the proceedings be published in pamphlet form.

1867—Springfield. Permanent members were granted the right to vote.

An amendment was adopted fixing the regular annual meetings on the third Tuesday in May.

The Quincy Medical Society was refused representation because it accepted members expelled from the Adams County Medical Society.

A Committee on Necrology was appointed to preserve statistics and memorial records of deceased members.

There was a heated debate among the physicians present on the advisability of eating fresh fruit during the season when cholera was prevalent. The final decision was that "moderate use of ripe fruit taken at ordinary meals is not objectionable."

The Committee on Legislation was instructed to consider the propriety of urging on the Legislature the passage of a law requiring railroad companies and others using machinery to be responsible for expense of board, nursing, medical supplies and medical attendance in case of injuries received in performance of their duties, during process of recovery not exceeding six months.

1868—Quincy. The Constitution was amended to the effect that the term of office of the president and vice-president should commence at the next annual meeting after their election.

The Society set out to investigate what legislation, if any, was necessary to secure the rights and comforts of the insane who did not have the benefits of the Illinois Hospital for the Insane.

1869—Chicago. At this meeting it was reported that only one of the members present in Springfield in 1850 was still in attendance.

After twelve years of service Dr. N. S. Davis resigned as permanent secretary.

For the first time the matter of legalizing the placing of the insane in institutions on certificate instead of requiring a jury trial was considered by the Society.

It was decided that since the Legislature would do nothing toward regulating the practice of medicine, and twenty-five years of effort had failed to get concerted action from medical colloges, the profession itself would have to take action. It endorsed legislation proposed by the National Medical Association establishing a

board of five censors in each state to examine candidates. If adopted by two-thirds of the states, the National Association planned to deny representation to the nonconforming states.

1870—Dixon. The Society voted to support and recommend only colleges which imparted the most thorough training, and to urge the trustees to carry on improvement.

It was recommended that legal provision be made to insure persons who had been acquitted of capital crimes on the plea of insanity being sent to lunatic asylums.

1871—Peoria. The motion proposed in 1863 to appoint a board of censors to attend and participate in examinations of the Chicago Medical College was finally acted on and censors appointed.

In the report on Cataract by E. L. Holmes we are told that removal by couching had become malpractice.

1872—Rock Island. A resolution was adopted that medical men should refuse to testify as experts in courts where purely expert opinion was required until a reasonable fee was paid.

The echoes of the Chicago fire are to be found in the records of this meeting. The treasurer acknowledged his indebtedness to Dr. M. M. Grannis for his special effort in rescuing the book of records from the great Chicago fire of October, 1871, in which was contained a full statement of the records and finances of the Society for the last ten years. Fergus' Sons were to be paid a sum not exceeding $100 to compensate them for their loss on the 1871 edition of the *Transactions,* burned in the fire.

In the future a professional short-hand reporter was to be employed by the permanent secretary to report *verbatim* all the proceedings.

1873—Bloomington. The Society named a Board of Censors whose duty was to consider names for membership.

A violent debate was held on the question of whether to devote the entire time of the convention to business, or to make allowance for visits to various institutions and some entertainment. The latter was agreed on.

In a paper on the "Hygienic Management of Children," N. S. Davis made a plea for sanitary improvement of dwellings and establishment of free parks.

1874—Chicago. Henceforth names for recommendation to membership were to be accompanied by the name of the medical college from which the physician was graduated. In addition every person presenting a name for membership was to be responsible for payment of dues—if unpaid, the election was void.

The Congress of the United States was to be requested to abolish duties on scientific books.

1875—Jacksonville. Following the lead of the National Medical Association it was voted to ask for legislation to place the medical corps on an equal footing with the officers of the other staff corps of the army.

The Committee on Publication recommended that henceforth the *Transactions* be bound in cloth.

A new Constitution was adopted.

1876—Urbana. Sarah Hackett Stevenson read a paper on "Progress in Physiology," the first to be given before the Society by a woman.

1877—Chicago. Dr. C. F. Barnett offered to withdraw charges against the Macoupin County Medical Society, and those against the Jersey County Society were dismissed.

In James N. Hyde's address of welcome he mentioned the union of the old *Medical Journal* and *Medical Examiner,* now the *Chicago Medical Journal and Examiner,* and continues: "I will say, in praise of the periodical, that it probably has more editors to the square inch than any other similar journal published in the country."

President Fitch's address recounts the controversy stirred up at the 1876 meeting of the National Medical Association over the seating of Sarah H. Stevenson as the first woman delegate ever to be admitted.

On May 21, 1877, the State Board of Health was finally created. On the board were J. H. Rauch, W. M. Chambers, A. L. Clark, H. Wardner, R. Ludlam, J. M. Gregory and Newton Bateman.

The Society adopted a resolution that the Chicago Medico-Historical Society be requested and authorized to publish an annual medical register of the State of Illinois.

Dr. Wilbur's report on idiocy announced the completion at Lincoln of a 300-pupil building.

1878—Springfield. The passage of the Medical Practice Act of May 21, 1877, was announced.

The Society adopted a new Constitution and By-Laws, which substituted a Judicial Council

of nine for the Board of Censors, added two members to the Committee on Arrangements, and to the standing committees added one on Gynecology, Ophthalmology and Otology.

1879—Lincoln. The Society approved the efforts of the Hon. Wm. R. Morrison to repeal the duty on quinine.

It was decided to ask for the establishment of a board of hygiene to inspect public schoolhouses, sites and plans.

G. W. Jones mentioned that there was much maudlin excitement during the year over the abstraction of a few bodies from family cemetery lots. There was a reaction, he believed, in favor of the profession.

1880—Belleville. The permanent secretary requested the support of the Society in securing the adoption of the metric system.

It was decided to issue a state register every year.

1881—Chicago. A. R. Jackson referred to the passing of the "family doctor" and the advent of the specialist.

Any member who had paid his dues for fifteen consecutive years was not to be dropped, but he was to receive the *Transactions* only if he paid dues.

1882—Quincy. Dr. Rauch of the State Board of Health discussed the effect of sewage from Chicago on the Illinois River, tending to minimize the effects.

1883—Peoria. The Society appropriated $250 to supply the members of the profession with blanks to fill out to obtain statistics from which to find the relations, etiologically, between appreciable meteorological and topographical conditions and the prevalence of acute diseases.

Mention is made of the abuse of medical charities by people who flocked to the city to receive the benefits of free clinics, who should remain at home and pay fees.

N. S. Davis declared that "germ theories" of disease and "germicide remedies" were running too rampant.

From the report on ophthalmology we learn that the recent introduction of electric lights had created problems in the profession.

1884—Chicago. We are informed that during the past winter there had been difficulty in securing anatomical material in Chicago.

A committee of three was appointed to report to the Secretary on the wisdom, propriety and best methods of aiding any public medical libraries.

1885—Springfield. In order to have papers published promptly an amendment was made appointing an officer intrusted with the duties of editor, who should be chairman of the Committee on Publication.

1886—Bloomington. A resolution was made against the use of tobacco and other narcotic poisons.

In the president's address is the first recommendation that instead of the *Transactions* the Society publish a journal. The committee did not favor a change.

There was a long discussion of Pasteur's cure for hydrophobia. Doubt was expressed as to his ability to diagnose the disease, although it was admitted that there was something in his theory.

1887—Chicago. The Society appropriated $25 to get a permanently bound set of the *Transactions* and acquire missing copies, for there had not been a complete set in possesion of its officers since the Chicago fire.

It was resolved that the Society use its influence in securing legislation requiring the filling of all offices having medical functions with medical men.

1888—Rock Island. This meeting was held under difficulties due to an overflow of the river. The delegates were met with boats and rafts, and the meeting had to be postponed until more suitable quarters were found, since the theater in which they were to meet couldn't be heated because of water in the basement.

It was noted that in 1887 the feature was incorporated of including portraits in the *Transactions.*

A committee was appointed to secure a charter for the Society and revise the Constitution.

A report was given on the possibilities of Volapük as a universal language in relation to the medical sciences.

1889—Jacksonville. The session was taken up with the revision of the Constitution and By-Laws. The matter of a charter again came up. The Society was invited to attend the next meeting of the Pharmacopoeal Society if it were incorporated.

Dissension in the ranks was evident, some of the members from the southern part of the

state feeling that the Illinois State Medical Society was only another name for the Chicago Medical Society. They complained that the committees were composed of members from Chicago or the northern part of the state.

1890—Chicago. A new Constitution was adopted which provided for three Sections with a chairman for each, in place of so many committees.

Dr. Poole of the Newberry Library, Chicago, spoke on the plan to start a medical library and made a plea for monographs.

A bill was discussed for the separate accommodation of insane criminals. Also there was agitation to arouse the interest of the medical profession to see that institutions for the insane were in charge of worthy persons, not political appointees.

1891—Springfield. The Society pledged itself to have a state exhibit at the coming Columbian Exposition.

1892—Vandalia. The first plea for preventive medicine was voiced by B. M. Griffith, who described it as the highest and most humane phase of sanitary science.

1893—Chicago. The Illinois State Medical Society condemned the American Medical Association for inserting ads for secret preparations in its journal.

At this time the list of registered physicians contained 5,500 names, with an attendance of 450 members at the meeting of the Society.

The Committee on Medical Legislation reported that it was working on bills for the feebleminded, new provisions for the Medical Practice Act, an act to prevent or control the sale of *nostrums,* inspection of milk, medical expert testimony and some hygienic measures.

1894—Decatur. The Society endorsed the scheme for an epileptic colony.

It was resolved to secure appropriate legislation to prevent blindness due to ophthalmia of the new-born.

Passage of the Lunacy Bill on June 16, 1884, was mentioned.

1895—Springfield. A special report on the History of the Illinois State Medical Society was given by Dr. William Ensign.

The Society advocated an appropriation by the State Legislature for sustaining a pathological laboratory in hospitals for the insane.

1896—Ottawa. An amendment was adopted to have a committee on society history.

A demonstration of roentgen rays was given by Dr. E. M. Weis.

Dr. John B. Murphy of Chicago, pioneer in producing successful circular anastomosis of the blood-vessels, gave a demonstration in which he used the "Murphy button."

1897—East St. Louis. The Society appointed delegates to the International Medical Convention to be held in Moscow.

A report was given on the State Vaccine Laboratory, established by a grant from the state in 1895 on the campus of the University of Illinois.

Present at this meeting was Dr. A. X. Illinski, who practiced in Cahokia when it and Kaskaskia were the principal settlements in Illinois and he did most of the doctoring for the region.

1898—Galesburg. Through action of the Society the bill had been vetoed exempting osteopaths from the Medical Practice Act.

Conditions in medical education in the state are revealed in the announcement that when the state board went into effect there were five medical colleges in the state, and in 1898 there were 25.

The Society approved action of the delegates, taken at the A. M. A. Convention, to raise $2,000 for the Rush Monument.

In the absence of Dr. Nicholas Senn, who was to have delivered the address on surgery, Dr. John Finley gave a humorous addres on "Intellectual Bacteriology."

The year 1898 was the last in which the *Transactions* were published. The following session of the Society saw the appointment of a committee whose task it was to journalize the proceedings.

ILLINOIS STATE MEDICAL SOCIETY JOURNAL ERA (1899-1940)

The 1899 meeting of the Illinois State Medical Society in Cairo may be said to mark the organization's awakening to its place and power in the affairs of the world of medicine. It was no longer to be a local group of scentific men meeting as it were in scientific isolation, but a professional body magnificently realizing its responsibility.

J. T. Pitner presides over the 260 delegates. (Of the state's 8,000 regular practitioners, 540

were members.) A committee appointed to study the matter, recommended journalization begin July 1, 1899, publishing monthly, the object being increase in membership; publication committee composed of E. W. Weis, chairman, H. N. Moyer and G. N. Kreider, gets out first issue as scheduled. Illinois is second state adopting journal idea, and first to own its journal. It is decided to invite 4,000 members of local societies to jubilee meeting to be held in 1900 at Springfield, where the Society was born, to celebrate 50 years of Society's existence, reckoning from the 1850 meeting, evidence of the 1840 convention not having turned up. The $50 required by the legislative committee "scraped the bottom of the treasury." Matters discussed: the 1899 medical practice act; advisability of paying salaries to members of the State Board of Health. Resolve to recognize licenses issued by states with equivalent requirements.

Illinois Society for the Prevention of Consumption organized in Chicago.

Senatorial investigating committee inquires into affairs of Cook County Hospital.

Private telephone lines for the convenience of patrons erected by physicians in central Illinois.

State Board of Health holds that a physician associated with unlicensed practitioner is guilty of unprofessional conduct.

E. V. D. Morris, Galesburg, was probably the first physician in the state to employ an automobile.

1900—University of Illinois takes lease on College of Physicians and Surgeons for 25 years.

Chicago man stopped by 1899 medical practice act from selling diplomas, organizes National Association of Liberal Physicians and Surgeons "to attack the despotism of state boards of health."

State Board of Health bars unvaccinated children from public gatherings during smallpox scare.

Physicians' Club of Kewanee goes on record against mention of members' names in newspapers.

Jubilee meeting at Springfield. Veterans of Society attend. Total expense of meeting $295.81; total receipts $567.50. About 450 attend.

Society membership increases 40 per cent in year, making 675 members. Journal averages 1,250 copies. Five county societies formed in year. Secretary receives honorarium of $350, treasurer, $50. Attempt to name Springfield permanent meeting place.

Sangamon County Medical Society condemns spitting in public. Of 1,087 members of local Chicago societies only 187 are members of state organization.

1901—United States District Court sentences president of Metropolitan Medical College to jail one year, fines him $500.

Members of State Board of health to be paid.

Legislature passes bill on vital statistics, with penalty.

Marie J. Mergler, Chicago, first woman to pass examination for intern at Cook County Hospital, dies May 8.

Journal accepts advertising.

Chicago Medical Society honors Nathan Smith Davis at banquet October 5.

George N. Kreider appointed editor at Peoria meeting of Society.

1902—Memorial Institute for Infectious Diseases founded in Chicago for study and treatment.

Supreme Court rules magnetic healers and osteopaths must have State Board license in order to practice.

Society has more than 1,200 members at time of meeting in Quincy. Rival delegations from Rock Island County appear and special committee finds in favor of medical association and against medical society; advises unity. Constitution revised to conform with A.M.A. Constitution and entire membership of 90 local county societies become members of state organization, making a total of 3,650, largest state society in world.

Kendall County Medical Society reports "A very pleasant and profitable time was spent discussing the subject of fees."

September typhoid epidemic in Chicago traced to milk, dirt, flies or water. The second city of the land is sending children to school with bottles of boiled water under their arms.

Professor Adolph Lorenz visiting United States says, "Perhaps the most curious (experience) was in Chicago. The board of health there made me undergo an examination in medicine, although I think I know something of my branch of my profession. Curiously enough, some weeks later they made me a doctor of laws, though I know nothing of law."

1903—Dunning Institutions reorganized. Dunning has 1,632 insane; 1,030 in poorhouse; 94 consumptives.

House of Delegates transacts business of Society for first time at Chicago meeting. Judicial Council advises discontinuance of Peoria Medical Journal and of Journal of Morgan County Medical Society and transfers their advertising and subscriptions if possible to Illinois Medical Journal. State divided into 9 councilor districts and councilors chosen.

Frank Billings has unique distinction of being elected president of A.M.A. two years in succession.

H. J. and W. T. Steward open institution in Chicago for treating diseases by apparatus designed by Finsen, Oudin d'Arsonval and others.

Vital statistics act passed.

College of Physicians and Surgeons makes radical change in curriculum, introducing elective courses in junior and senior years.

Drs. Billings and Patrick announce Cook County institutions now free of "pull" and all positions at Dunning, excepting superintendent, on civil rating.

1904—J. W. Pettit reports for committee on tuberculosis prevention, giving plan for establishment of tent colony at Ottawa to demonstrate

methods discussed at meeting of Society at Bloomington. During year Journal circulation grows from 1,500 to 4,500 and from 48 pages to 132.

Ottawa tent colony opens July 1 with 2 patients.

Sanitary investigation of Illinois, Mississippi, Missouri Rivers results in report that great flow of Lake Michigan water through canal into the Illinois has so diluted sewage that river is purer today than in 1899 prior to opening of drainage canal.

Staff of County Hospital reduced to 65 and merit test provided for appointment to it.

Beginning with January, 1905, 6 issues is a volume of Journal.

J. W. Pettit says spitting ordinance was at first jeered at by Ottawa citizens.

1905—Chicago Medical Society, which is the society for Cook County, has 11 branches with about 1,600 members and has own medical defense organization.

Illinois State Association for the Prevention of Tuberculosis organized, January 19.

Subscription price of Journal reduced from $3 to $2. Deficits of past two years wiped out and 13 future issues of Journal provided for. Under amendments to Constitution and By-laws Medico-Legal Committee consists of 3 members from Cook County and 1 from each other county, members to be chosen by House of Delegates, and fund to be established to provide legal aid to members. Failing to get a legislative appropriation, Ottawa tent colony incorporated.

Doctors say they fail to register births because they are not paid as law provides.

1906—F. Billings, Rabbi Emil G. Hirsch, Miss Julia Lathrop, John T. McAnally appointed to State Board of Charities.

World wide crusade against venereal disease.

Chicago Board of Education decides to have public school pupils examined for tuberculosis. Superintendent to keep tuberculous children from schools.

Chief Collins of Chicago police details two detectives to ride on Northwestern elevated railroad and arrest all violating anti-spitting ordinance in cars used by women.

Dr. McCormack of A.M.A. makes organizing tour of state and reports great activity of quacks and failure of Society and State Board of Health to work together.

Medical defense fund agreed on at Springfield meeting. Illinois among first of state groups to adopt uniform defense. This is a great factor in increasing membership. Society opposes reduction of fees to old line life insurance companies. A medical education committee is appointed. Unusual feature of meeting is clinics at hospitals for diseases of ear, nose, throat.

Chicago Medical College formally merged with Northwestern University, after period of affiliation.

State Board of Charities suggests a state psychopathic institute, hydrotherapy, uniform and complete medical records, more humane and intelligent care of charges.

1907—Physicians may collect for testifying at trial only usual witness fee.

Legislature condemns clinics at Elgin Asylum as not beneficial to patients.

Physicians assigned to city ambulance service in Chicago for first time.

With organization of Franklin County Medical Society state completely organized.

State meeting at Rockford. At this gathering it was pointed out that from now on president of Society must give a great deal of time to the state organization. Complimentary banquet given for J. H. Hollister and W. O. Ensign, medical pioneers.

Idea of admitting homeopathic and eclectic societies to benefits of legal defense fund endorsed.

President Percy warns profession that it must change attitude on newspaper advertising.

Charge made that 25 per cent of population receives medical charity, while one-half of 1 per cent receives other charity.

Chicago Medical Society committee on criminal abortion has Chicago papers drop advertisements from abortionists.

Chicago carries on campaign against baby farms.

Illinois branch of Public Health Defense League organizes to enlist active support of laity to combat quackery, prevent food adulteration and drug substitution, prevent sale of narcotics and alcohol disguised as patent medicines, prevent circulation of indecent medical advertisements and advocates establishment of a national department of health.

1908—Legislature adopts law regulating sale of cocaine.

General Assembly passes Glackin law authorizing cities and villages to establish and maintain sanitariums for treatment of tuberculosis.

Governor appoints committee authorized by General Assembly to investigate occupational diseases and report at next meeting of assembly.

W. O. Ensign reports that Medical Society of Illinois met at Springfield, January, 1840, and adopted a fee bill with resolutions governing its enforcement. John Todd was president and C. F. Hughes, secretary.

Board of Charities secures compulsory training schools for nurses and attendants of state institutions, hydrotherapy, better recreation and industrial re-education, uniform records established and other necessary improvements.

Possibility discussed of publishing JOURNAL weekly, at Peoria meeting.

1909—New milk law requiring pasteurization of all milk products except those from cows which have passed tuberculin test, effective January 1.

Vasectomy bill endorsed at Quincy meeting. Committee appointed to work with State Board of Health and national committee for suppression of ophthalmia neonatorum. New Charities Administration Law approved, provides management of institutions by five member Board of Administration at salary of $6,000.

Harvard, first school for tuberculous children, opened in Chicago with 30 pupils.

Institute for Feebleminded at Lincoln, first of its kind in United States, opens to study minds and proper employment of inmates.

Illinois Medical College affiliates with Loyola University.

1910—Interest at fever heat over charges on State Board of Health and A.M.A. at Danville meeting. House of Delegates called to order Tuesday evening. President Cotton adjourns meeting and rump session meets under Vice-President Stubbs to further consider the matter of separate board of examiners. Storm over this rumbles on for months. Carnegie Foundation for the Advancement of Teaching reports too many doctors in Illinois of whom too many have trained in inferior schools. Trustees of Northwestern University Medical School increase requirement of preliminary collegiate education from 1 to 2 years. Legislative committee organizes forces to secure legislation.

1911—Beginning January 1 no new license issued to any milk dealer unless his milk supply is properly pasteurized or from a dairy tuberculin tested during the year.

County secretaries notified that each county should have regularly appointed delegates to state meeting.

At Aurora meeting there is furore over society delegates, many of whom are not properly appointed. Dr. Percy attacks present organization of Chicago Medical Society. Legislative committee reports passage of bills providing $60,000 for Medical School of the state university; temporary license for five year students; establishment of new insane hospital and new institution for crippled children. Hardin, Johnson, Saline and Pope Counties suspended.

1912—League for Medical Freedom campaigns in Illinois under leadership of Mr. Joseph Mason, former secretary Illinois State Board Civil Service Commissioners, against the medical profession.

At Springfield meeting, spread of knowledge on sex hygiene endorsed. The Medico-Legal Committee, lost its first malpractice suit. Section on public health and hygiene organized.

According to plea filed with county clerk at Elgin, ballots of last general primary in Kane County reek with diphtheria germs and recount might cause epidemic.

American College of Surgeons incorporates November 25 at Springfield.

1913—Society has 5,708 members. Has organizer from A.M.A. in field canvassing for members.

University of Illinois accepts deed of College of Physicians and Surgeons from alumni, and college becomes medical school of university.

At Peoria meeting silver tea set given to H. N. Moyer, chairman of Medico-Legal Committee in recognition of his services. JOURNAL prints 6,100 copies each month. Revolution in Society puts Cook County on top, culmination of groundswell beginning in 1910. Chicago delegates in complete control, meeting ends without session of House of Delegates. George Kreider resigns editorship.

About 75 per cent of members insured against malpractice suits and H. N. Moyer suggests group insurance to save cost.

Clyde D. Pence as acting editor and Henry G. Ohls as managing editor, take over the Journal, changing its style, enlarging the page.

Rush Medical College makes fifth clinical year as intern or its equivalent compulsory for class entering in 1914.

1914—Society unanimously condemns American College of Surgeons at Decatur meeting for "presuming to say who shall practice surgery." Illinois State Surgical Society "plans to let the public know who can give good surgical service." President Charles J. Whalen gives Society a business administration, solicits nonmembers to join, drops members in arrears and brings membership from 5,532 to 6,093. Iroquois-Ford Medical Society raises obstetric fee from $10 to $15 with mileage added.

First building of new Cook County Hospital opened August 15.

October issue of Journal, containing transactions of third annual meeting of Alienists and Neurologists at which they outlined comprehensive program for mental health.

1915—Office of internal revenue collector in Chicago busy with applications of physicians and druggists for licenses under Harrison Anti-narcotic Law.

House of Delegates adopts new Constitution and By-Laws at Springfield meeting. Resolve to instruct delegates to A.M.A. to use every honorable means to prevent recognition of American College of Surgeons. In future no medical defense of member not holding receipt for dues, and members in arrears will be dropped. State Board of Health to revoke licenses of illegal practitioners, revision of occupational disease law, birth and death registration. Cancer commission appointed.

Standards for "other practitioners" elevated after September 1 with educational requirements approaching that for physicians.

Ben Reitman, after serving 60 days in New York jail for advocating birth control, returns to Chicago to start similar campaign.

Cost of newsprint prompts Journal to ask contributors to condense articles.

University of Chicago to extend undergraduate course from 2 to 4 years.

1917—Society opposed to 8-hour law for nurses and other working women.

Consolidation bill passes, creating State Department of Public Health and Department of Registration and Education to handle work of old State Board of Health, takes effect July 1.

Bloomington meeting draws large attendance despite war, and Society prepares for great demand of government. Sadie Bay Adair, Chicago, chosen second vice-president is first woman to hold office in Society. House of Delegates pledges support to government and resolves to care for interests and patients of physicians who serve, returning 50 per cent of such fees to absent member's family. Compulsory Health Insurance committee named.

Bayard Holmes deplores decrease in students of reputable medical schools while cults increase. War takes 15,000 medical students.

Chicago College of Medicine and Surgery merges with Department of Medicine of Loyola University.

Tri-City Medical Society pledges $100 a month to any member called to war service.

1918—Announced at Springfield meeting that the Illinois plan for care of returned tuberculous soldiers is being adopted by other states. University of Illinois College of Medicine permits students to complete required course in 3 years instead of 4. Government calls 1,700 physicians into service.

1919—La Salle County Tuberculosis Sanitarium at Ottawa, first of 40 to be built under Glackin Law, dedicated February 2.

Council recommends enactment of law providing equitable representation on advisory committee for registered nurses, as the present nurses' board composed of graduate nurses has brought a condition much against public welfare and is trying to make existence of small hospitals impossible.

President Fiegenbaum reports at Peoria meeting, more than 50 per cent of district councillors in service, and Mrs. Gilmore carries on as secretary in absence of husband. House of Delegates rescinds hasty endorsement of annual registration of physicians act at 1918 meeting; approves of committee on hospital standardization. Charles J. Whalen chosen editor of the JOURNAL, to take charge in August.

Journal announces "for first time in the history of Illinois accurate mortality figures available."

Chicago Training School for Home and Public Health Nursing, graduates first class of more than 800. This is a two months' course to make up for shortage and provide for a possible recurrence of influenza epidemic.

1920—Medical veterans of war and those who served government in any way met with Society in Rockford to organize the Illinois Chapter of the Medical Veterans of the World War. House of Delegates favors states rights; instructs delegates to A.M.A. to oppose state medicine, compulsory health insurance, county and state health agencies and "allied dangerous Bolsheviki schemes." Committee on Standardization of Hospitals decides hereafter Illinois State Medical Society is to do the standardization.

Committee on Medical Education and Hospitals of the Society and representatives of Illinois Hospital Association and of medical colleges decide that to be eligible to train interns, hospitals must have 25 beds.

1921—John R. Neal, Springfield, heads Legislative Committee. Society fights Sheppard-Towner bill.

Medical Practice Act of 1917 held unconstitutional by State Supreme Court.

Society takes note of the monetary collapse at Springfield annual meeting. Comments that this organization appears to be the only state group to pass resolutions condemning the Sheppard-Towner bill. Chas. E. Humiston talked against bill before Congress.

1922—Sheppard-Towner bill becomes law; Illinois profession organizes to prevent state cooperation.

Wm. Barnes, Decatur, plans to sell collection of butterflies and moths, said to be largest, most valuable private collection of its kind in the United States, to Smithsonian Institute and give proceeds to Macon County Hospital.

Society reports success at A.M.A. meeting in getting passed the resolutions it proposed, including definition of state medicine. House of Delegates of Society at Chicago meeting fixes dues at $5.

Society asks members to contribute to fund for lay publicity campaign authorized by House of Delegates.

State admitted to registration area for births.

1923—Legislative Committee of Society prepares new medical practice bill, which is introduced in Legislature.

Reported at Decatur meeting that Council during past year inaugurated publicity bureau to disseminate knowledge through lay press concerning profession's contributions to humanity, and to counteract similar propaganda by cults.

Cooperation with maternity act defeated. Malpractice suits and cost of defense increase.

United States Public Health Service estimates Illinois spent $30,000,000 last year for patent medicines and less than $500,000 for public health.

Lay Publicity campaign to begin at once in properly organized counties.

1924—Society notes with pleasure at Springfield meeting that Marcus Kavanaugh declared

new medical practice act constitutional. Society resolves to ask Department of Registration and Education not to permit physician from a foreign country lacking reciprocity with the United States to take state board examinations until he has full citizenship. Believed that fight to oust State Department of Public Health out of practice of medicine is temporarily won except for state ward and care of indigent. Society approves county clinic for indigent poor at Quincy.

William Allen Pusey president-elect of A.M.A.

1925—Appellate court reverses order of circuit court judge, which compelled Chicago health commissioner to issue license for birth control clinic.

It is agreed at joint meeting that Society should provide advisory council of 5 to cooperate with, counsel and advise executives and board of directors of Illinois Society for Crippled Children in medical matters

Meeting at Quincy was called the diamond jubilee, dating Society from reorganization in 1850. Adams County Medical Society, also observing diamond jubilee, was host. Adams County society gets out convention number of Quincy Medical Bulletin. Society has 6,577 members. Vital point of discussion for immediate future is need for shortening time and expense of preparatory medical training without lessening efficiency. Dues increased to $8.00.

Illinois Federation of Women's clubs plan preschool examinations of children in cooperation with Illinois State Medical Society.

1926—Judge Marcus Kavanaugh asks Chicago Medical Society to name 3 alienists to make mental test of a prisoner sentenced to hang for murder, about whose sanity alienists for defense and prosecution differ. The judge's use of this impartial evidence said to be new.

House of Delegates creates tenth councilor district, dividing large ninth district. Society is pioneer in lay education work. Scientific Service Committee created to work with Education Committee. Council establishes post-graduate service for county societies. Motion carried in favor of section in radiology.

Representatives of Illinois State Medical Society, State Department of Public Health, Illinois Tuberculosis and Public Health Association, Illinois State Association of Graduate Nurses, Illinois Society for Prevention of Blindness, Chicago Heart Association, Illinois Society for Mental Hygiene meet and agree to be temporary organization of a state health council.

1927—Lay Education Committee becomes Education Committee at Moline annual meeting. Membership now 7,247. Society protests fixing by Congress of dosage or prescription of spirituous liquor or restriction of legitimate use of heroin by physicians. Report on teaching clinics inaugurated during administration of Past President Krafft. Woman's Auxiliary to state organization begins with Mrs. Henry G. Mundt as first president. Custom of giving past presidents certificates of service begun.

1928 Warren County Medical Society starts clinics for crippled children.

Society opposes basic science law in effect in some states.

Malcolm La Salle Harris president-elect of A.M.A.

1929—Radiological Society of North America awards John Scott medal and $1,000 to William T. Bovie, Ph.D., for study and development of "electric surgeons knife."

W. D. Chapman goes to Washington, D. C., to combat Newton bill.

Chicago Medical Society contends violation of code of ethics and not economic activities is cause of expulsion of Louis E. Schmidt. His connection with Public Health Institute, and through it with Social Hygiene League, violates code. State organization upholds county society.

Campaign to rescue Chicago's great west side hospital district, one of greatest in world, from squalid surroundings by making it a medical park.

1930—Dr. Fredrickson tells of medical student advisory committee he helped organize to promote and arrange lectures for students and interns on medical organization, economics, legislation, ethics.

House of Delegates chooses Irving S. Cutter permanent historian.

1931—Council meets with American Legion to form contact committee between the two in January, 1931.

Illinois attorney general holds public hospitals cannot exclude doctor licensed by state. Controversy started by Decatur City Hospital for Contagious Diseases which exclude osteopaths and other drugless doctors.

Michael Reese Hospital establishes first serum center in Illinois.

President-elect R. R. Ferguson unable to attend due to serious operation and President Chapman, after conclusion of conference, goes to Dr. Ferguson's home in Chicago to induct him according to decision of House of Delegates. Knox County Medical Society scraps over management of Galesburg Cottage Hospital, splitting in factions, and Illinois State Medical Society revokes charter until matter is settled; investigates and sends mediators. Society lowers dues to $7. Membership 7,543.

Council on Medical Education and Hospitals of A.M.A. approves 53 Illinois hospitals for internships, August 15.

Chicago City Council approves ordinance for supervisor of pound to release unclaimed dogs to medical schools and research laboratories. This is substitute for anti-vivisection ordinance proposed.

1932—Cook County Hospital full while private hospitals only 58 per cent of capacity.

Knox County Medical Society reorganizes January 8 with 42 charter members.

Illinois Board of Medical Examiners resolves that University of Illinois make practicable course in hygiene compulsory for freshman matriculation.

Committee on veterans' service and on medical economics formed at Springfield meeting. Ravenswood Hospital, Chicago, announces its new plan of staff nursing, reducing cost of hospitalization to patents needing more than general floor care. Wlliam D. Chapman and William C. Woodward report on their appearance before Senate committee to protest Sheppard-Towner bill. Resolutions: in favor of lien bill, to amend act on ophthalmia neonatorum, opposing building of government hospitals and urging use of available space in local hospitals. New councilor district created to give representation to counties in third district outside Cook County.

School for occupational therapy to be formed to work with Goodwill Industries shops for handicapped and occupation service, and Cook County Hospital.

To give 16,000 physically handicapped children in state proper treatment and help them to be self-sustaining citizens, Society plans far-reaching program of clinics. Each county medical society may conduct such a clinic. Warren County clinic is model for this.

1933—Cook County Superior Court Judge Chas. H. Miller holds corporation may not practice medicine.

Pediatrists discuss advisability of pediatrics section at Peoria meeting. Medical Women's day held. Medical care of poor taken up, various plans in counties.

Governor signs law making use of silver nitrate in eyes of newborn obligatory.

Cook County Graduate School of Medicine completes course in pediatrics.

Murderers of Dr. B. F. Garnitz sentenced to 100 years each in jail. Members of Chicago Medical Society will be granted police protection on request when making calls.

1934—Illinois Emergency Relief Commission works out plan of medical relief with local societies.

Medical Park of Chicago incorporated January 3.

Chas. D. Center, Quincy, president-elect of Society dies March 31 of injuries received when struck by car.

In honor of Chas. D. Center, successor not chosen till Thursday, at Springfield meeting, then Charles S. Skaggs named. About 40 counties cooperate for medical relief of indigents, on plan drawn up by Society and relief commission. Contract practice condemned. Package library as used by Educational Committee said to be unique with this group. Dues reduced to $5. When president ends term of office, he becomes ex-officio member of Council for three years. Special Scientific Exhibition committee appointed; to make awards for good exhibits.

Rockford meeting has motion picture exhibit. Obstetricians receive permission for special meeting next year.

Mississippi Valley Medical Society organizes at Quincy to hold annual meetings for post-graduate instruction.

1936—Group hospitalization tried here and there with Chicago hospital extending it to members of staff and employes.

North Shore Branch of Chicago Medical Society offers reward for conviction of Dr. Silber C. Peacock's murderers.

Social Security Act hailed as menace at Springfield meeting.

New low cost 'plan for hospital care" adopted by Chicago Hospital Council.

1937—Faculty of Rush abolishes fifth year requirement.

Society Cancer Committee organizes war on cancer, aided by Woman's Field Army.

Society cooperates with Department of Health, Illinois Academy of Pediatrics, American Committee on Maternal Welfare, Inc., in bringing post-graduate courses in obstetrics and pediatrics to county medical societies.

Dues raised to $8 at Peoria meeting. Report on organization of American Board of Surgery in answer to need for agency to certify surgeons. Council creates Advisory Committee on Control of Syphilis to cooperate with health department. Secretary Camp says, "Although the seal of the Illinois State Medical Society has shown that the Society was organized in 1850, research investigations on the part of the late L. H. Zeuch, editor of the 'History of Medical Practice in Illinois,' developed the information that the Society was actually formed in 1840, which change will be made on the seal and the stationary following this annual meeting."

Education Committee arranges "refresher courses" in pediatrics and obstetrics due to Social Security Act.

Edwin Rawlins, general counsel of Society advises Medico-Legal Committee be abolished, as it practices law contrary to rule of American Bar Association. Medical Education and Hospitals Committee reports aptitude tests for applicants

to medical schools. Group hospitalization in Chicago, Peoria, Rockford.

Pre-marital examination law effective July 1.

1938—January, 1938 volume is first dating Society from 1840.

Council names committee on Maternal Welfare.

Council plans formation of Fifty Year Club to include every member of Society who has completed 50 years of practice.

Hall of Health proves great success at initial showing at Springfield meeting. Society assumes control of maternal and infant welfare, crippled children's care and control of syphilis rather than let lay groups handle work. Council creates committee on Interprofessional Relations for cooperation between medical and dental professions. Regular sections for pediatrics and obstetrics recommended. Medico-Legal Committee to help and advise members as far as possible but not to hire counsel or give legal defense.

1939—John R. Neal becomes dean of Cook County Graduate School of Medicine.

Hall of Health repeated at Rockford meeting. Society has 7,819 members. Committee on Occupational Therapy and Industrial Hygiene formed at request of A.M.A. for a cooperating group with their committee. Group hospitalization more popular in Chicago since sanctioned by A.M.A. House of Delegates and Councils of Illinois State Medical Society and Chicago Medical Society. Cook County Hospital dropped from list hospitals approved by A.M.A. for intern training, but still approved by Department of Education and Registration of Illinois. John S. Nagel outlines plan for the establishment of a self-perpetuating trust fund for the care of dependent doctors and their families. House of Delegates opposed to graduates of foreign medical schools being allowed to practice in Illinois and will ask Legislature to pass law on this.

July 26, Justice James M. Proctor sustained physicians' demurrers to indictment of officers of the A.M.A. and three medical bodies on antitrust violation charge.

Rush Medical College to become graduate medical school, emphasizing research and providing specialization training.

ILLINOIS STATE MEDICAL SOCIETY

List of Officers and Places of Meeting Since Organization of the Society

Year	President	Secretary	Treasurer	Meeting Place
1840	John Todd	C. F. Hughes		Springfield
1841	John Todd	F. A. McNeill		Springfield
1842	John Todd	F. A. McNeill		Springfield
1843	John Todd	F. A. McNeill		Springfield
1844	John Todd	F. A. McNeill		Springfield
1845	John Todd	F. A. McNeill		Springfield
1846	John Todd	F. A. McNeill		Springfield
1847	John Todd	David Prince		Springfield
1848	John Todd	David Prince		Springfield
1849	John Todd	David Prince		Springfield
1850*	Rudolphus Rouse	Edwin G. Meek		Springfield
1850	Wm. B. Herrick	Edwin G. Meek	Jno. Halderman	Springfield
1851	Samuel Thompson	H. Shoemaker	R. Rouse	Peoria
1852	Rudolphus Rouse	E. S. Cooper	Edw. Dickenson	Jacksonville
1853	Daniel Brainard	H. A. Johnson	A. B. Chambers	Chicago
1854	C. N. Andrews	H. A. Johnson	N. S. Davis	La Salle
1855	N. S. Davis	E. Andrews	J. V. Z. Blaney	Bloomington
1856	H. Noble	N. S. Davis	J. V. Z. Blaney	Vandalia
1857	C. Goodbreak	H. A. Johnson	J. V. Z. Blaney	Chicago
1858	H. A. Johnson	N. S. Davis	J. W. Freer	Rockford
1859	David Prince	N. S. Davis	J. W. Freer	Decatur
1860	Wm. M. Chambers	N. S. Davis	J. W. Freer	Paris
1863†	A. McFarland	N. S. Davis	J. H. Hollister	Jacksonville
1864	A. H. Luce	N. S. Davis	J. H. Hollister	Chicago
1865	J. M. Steele	N. S. Davis	J. H. Hollister	Bloomington
1866	F. F. Haller	N. S. Davis	J. H. Hollister	Decatur
1867	S. W. Noble	N. S. Davis	J. H. Hollister	Springfield
1868	S. T. Throwbridge	N. S. Davis	J. H. Hollister	Quincy
1869	S. T. Throwbridge	T. D. Fitch	J. H. Hollister	Chicago
1870	J. V. Z. Blaney	T. D. Fitch	J. H. Hollister	Dixon
1871	G. W. Albin	T. D. Fitch	J. H. Hollister	Peoria
1872	J. O. Hamilton	T. D. Fitch	J. H. Hollister	Rock Island
1873	D. W. Young	T. D. Fitch	J. H. Hollister	Bloomington
1874	T. F. Worrell	T. D. Fitch	J. H. Hollister	Chicago
1875	J. H. Hollister	T. D. Fitch	Wm. E. Quine	Jacksonville
1876	T. D. Washburn	N. S. Davis	J. H. Hollister	Urbana

*Rudolphus Rouse and Edwin G. Meek acted as president and secretary respectively until the Constitution was adopted and new officers elected, Herrick succeeding Rouse as president.

†No meetings were held in 1861-62, due to the Civil War.

OFFICERS CONTINUED

1877	T. D. Fitch	N. S. Davis	J. H. Hollister	Chicago
1878	J. L. White	N. S. Davis	J. H. Hollister	Springfield
1879	E. P. Cook	N. S. Davis	J. H. Hollister	Lincoln
1880	Ephraim Ingals	N. S. Davis	J. H. Hollister	Belleville
1881	G. W. Jones	S. J. Jones	J. H. Hollister	Chicago
1882	Robert Boal	S. J. Jones	J. H. Hollister	Quincy
1883	A. T. Darrah	S. J. Jones	J. H. Hollister	Peoria
1884	E. Andrews	S. J. Jones	Walter Hay	Chicago
1885	D. S. Booth	S. J. Jones	Walter Hay	Springfield
1886	Wm. A. Byrd	S. J. Jones	Walter Hay	Bloomington
1887	Wm. T. Kirk	D. W. Graham	Walter Hay	Chicago
1888	Wm. O. Ensign	D. W. Graham	Walter Hay	Rock Island
1889	C. W. Earle	D. W. Graham	T. W. McIlvaine	Jacksonville
1890	John Wright	D. W. Graham	T. W. McIlvaine	Chicago
1891	Jno. P. Mathews	D. W. Graham	Geo. N. Kreider	Springfield
1892	Charles C. Hunt	D. W. Graham	Geo. N. Kreider	Vandalia
1893	E. Fletcher Ingals	D. W. Graham	Geo. N. Kreider	Chicago
1894	Otho B. Will	J. B. Hamilton	Geo. N. Kreider	Decatur
1895	Daniel R. Brower	J. B. Hamilton	Geo. N. Kreider	Springfield
1896	D. W. Graham	J. B. Hamilton	Geo. N. Kreider	Ottawa
1897	A. C. Corr	J. B. Hamilton	Geo. N. Kreider	East St. Louis
1898	J. N. G. Carter	E. W. Weis	Geo. N. Kreider	Galesburg
1899	J. T. Pitner	E. W. Weis	Geo. N. Kreider	Cairo
1900	H. N. Moyer	E. W. Weis	Geo. N. Kreider	Springfield
1901	G. N. Kreider	E. W. Weis	E. J. Brown	Peoria
1902	J. T. McAnally	E. W. Weis	E. J. Brown	Quincy
1903	M. L. Harris	E. W. Weis	E. J. Brown	Chicago
1904	C. E. Black	E. W. Weis	E. J. Brown	Bloomington
1905	W. E. Quine	E. W. Weis	E. J. Brown	Rock Island
1906	H. C. Mitchell	E. W. Weis	E. J. Brown	Springfield
1907	J. F. Percy	E. W. Weis	E. J. Brown	Rockford
1908	W. L. Baum	E. W. Weis	E. J. Brown	Peoria
1909	J. W. Pettit	E. W. Weis	E. J. Brown	Quincy
1910	J. L. Wiggins	E. W. Weis	E. J. Brown	Danville
1911	A. C. Cotton	E. W. Weis	E. J. Brown	Aurora
1912	W. K. Newcomb	E. W. Weis	E. J. Brown	Springfield
1913	L. H. A. Nickerson	E. W. Weis	A. J. Markley	Peoria
1914	Charles J. Whalen	W. H. Gilmore	A. J. Markley	Decatur
1915	A. L. Brittin	W. H. Gilmore	A. J. Markley	Springfield
1916	C. W. Lillie	W. H. Gilmore	A. J. Markley	Champaign
1917	W. L. Noble	W. H. Gilmore	A. J. Markley	Bloomington
1918	E. B. Coolley	W. H. Gilmore	A. J. Markley	Springfield
1919	E. W. Fiegenbaum	W. H. Gilmore	A. J. Markley	Peoria
1920	J. W. Van Derslice	W. H. Gilmore	A. J. Markley	Rockford
1921	W. F. Grinstead	W. H. Gilmore	A. J. Markley	Springfield
1922	Charles Humiston	W. H. Gilmore	A. J. Markley	Chicago
1923	E. P. Sloan	W. D. Chapman	A. J. Markley	Decatur
1924	E. H. Ochsner	W. D. Chapman	A. J. Markley	Springfield
1925	L. C. Taylor	H. M. Camp	A. J. Markley	Quincy
1926	J. C. Krafft	H. M. Camp	A. J. Markley	Champaign
1927	Mather Pfeiffenberger	H. M. Camp	A. J. Markley	Moline
1928	G. Henry Mundt	H. M. Camp	A. J. Markley	Chicago
1929	J. E. Tuite	H. M. Camp	A. J. Markley	Peoria
1930	F. O. Frederickson	H. M. Camp	A. J. Markley	Joliet
1931	Wm. D. Chapman	H. M. Camp	A. J. Markley	East St. Louis
1932	R. R. Ferguson	H. M. Camp	A. J. Markley	Springfield
1933	John R. Neal	H. M. Camp	A. J. Markley	Peoria
1934	Philip H. Kreuscher	H. M. Camp	A. J. Markley	Springfield
1935‡	Chas. D. Center (Past President-Elect)			
1935	Chas. S. Skaggs	H. M. Camp	A. J. Markley	Rockford
1936	Chas. B. Reed	H. M. Camp	A. J. Markley	Springfield
1937	Rolland L. Green	H. M. Camp	A. J. Markley	Peoria
1938	R. K. Packard	H. M. Camp	A. J. Markley	Springfield
1939	S. E. Munson	H. M. Camp	A. J. Markley	Rockford
1940	James H. Hutton	H. M. Camp	A. J. Markley	Peoria

‡Died before induction into office.

VICARIOUS PATERNITY

A gentleman was much surprised when the good-looking young lady greeted him by saying "Good evening." He could not remember ever having met her before.

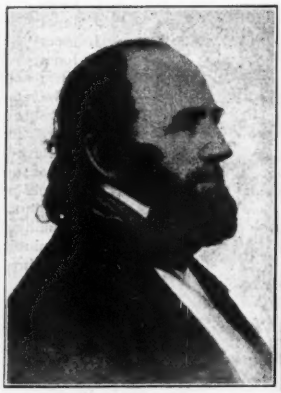
She evidently realized her mistake, for she apologized and explained, "Oh! I'm so sorry! When I first saw you I thought you were the father of two of my children."

She walked on, while the man stared after her. He did not know, of course, that she was a school teacher. —*Let's Go.*

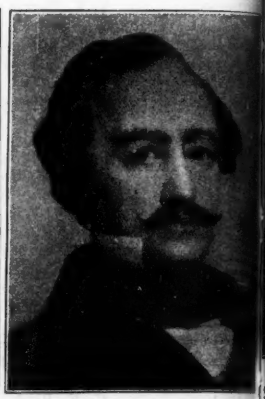
PRESIDENTS
ILLINOIS STATE MEDICAL SOCIETY
1840 - 1940

J. F. Todd, M. D., 1840

W. B. Herrick, M. D., 1850

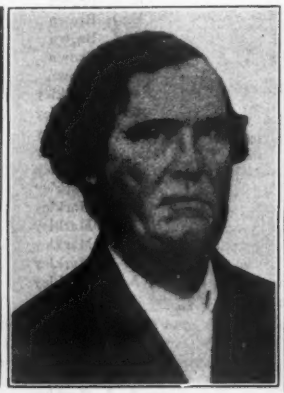


Rudolph Rouse, M. D., 1852

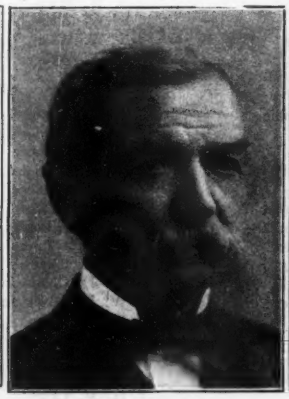


Daniel Brainard, M. D., 1853

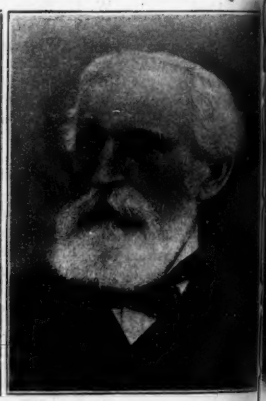
N. S. Davis, M. D., 1855



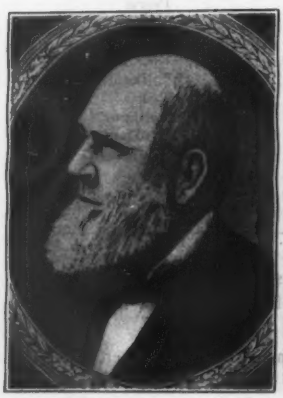
Harrison Noble, M. D., 1856



C. Goodbrake, M. D., 1857

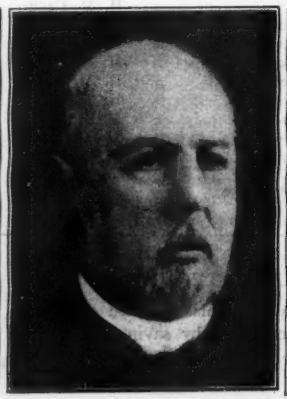


H. A. Johnson, M. D., 1858

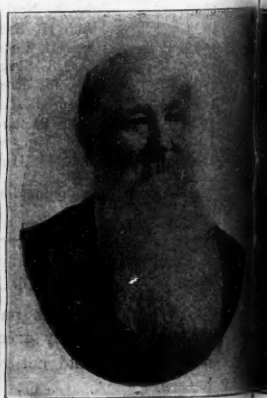


David Prince, M.D., 1859

W. M. Chambers, M. D., 1860

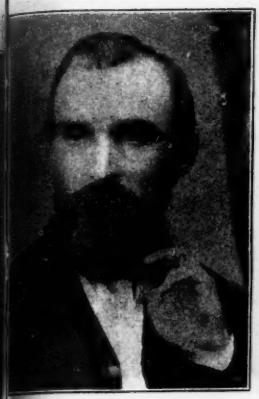


A. McFarland, M. D., 1863

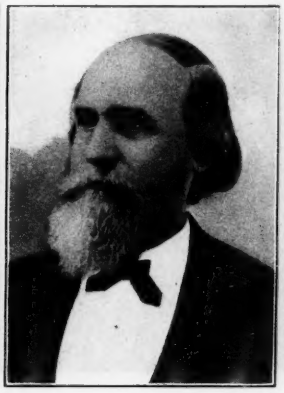


F. F. Haller, M. D., 1866

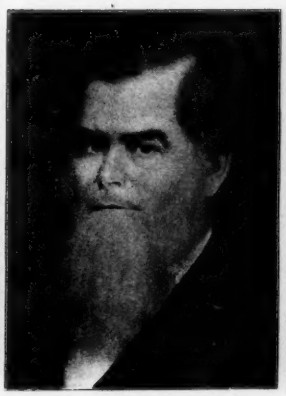
PRESIDENTS



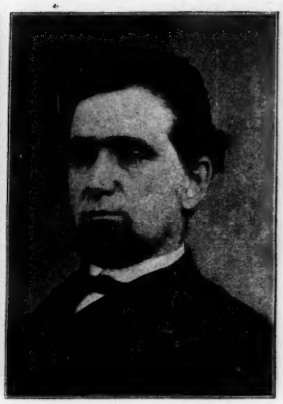
S. T. Trowbridge, M. D., 1868-69



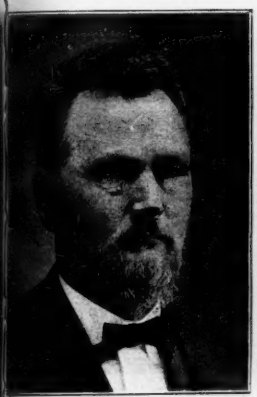
James V. Z. Blaney, M. D., 1870



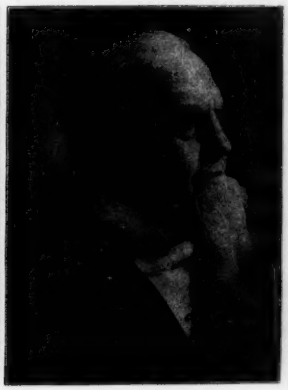
J. O. Hamilton, M. D., 1872



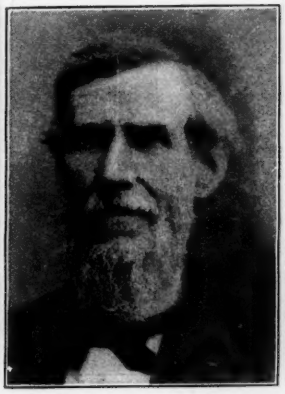
D. W. Young, M. D., 1873



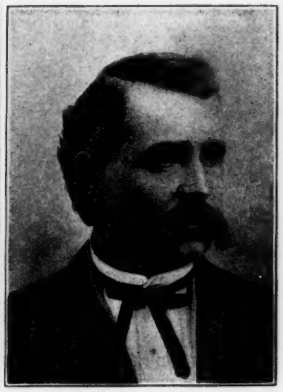
T. F. Worrell, M. D., 1874



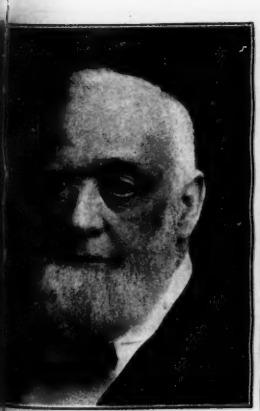
J. H. Hollister, M. D., 1875



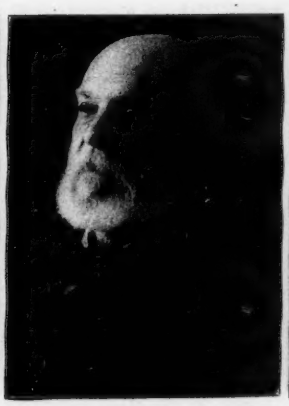
T. D. Washburn, M. D., 1876



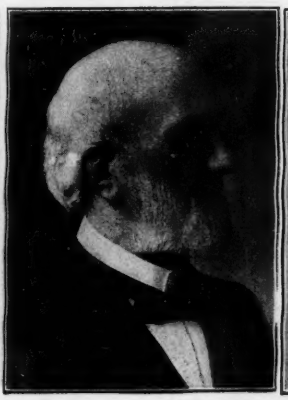
T. D. Fitch, M. D., 1877



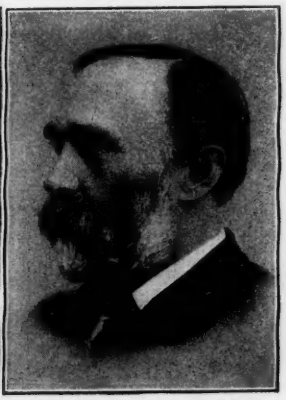
J. L. White, M. D., 1878



E. P. Cook, M. D., 1879



E. Ingals, M. D., 1880



G. W. Jones, M. D., 1881

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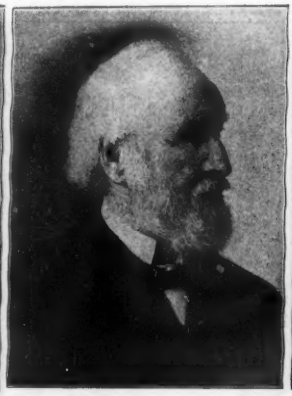
Robert Boal, M. D., 1882

A. T. Darrah, M. D., 1883

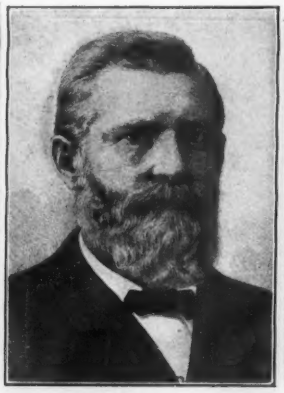


Edmund Andrews, M. D., 1884

D. S. Booth, M. D., 1885

O. B.

W. A. Byrd, M. D., 1886



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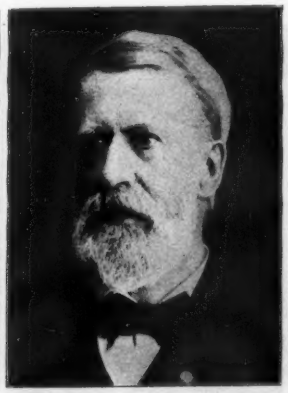
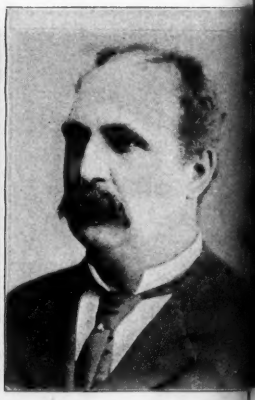
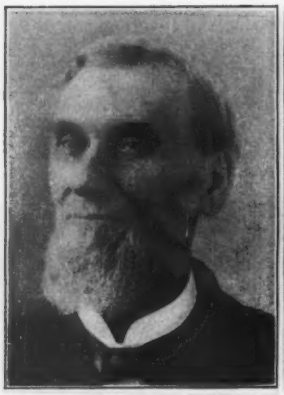


William O. Ensign, M. D., 1888

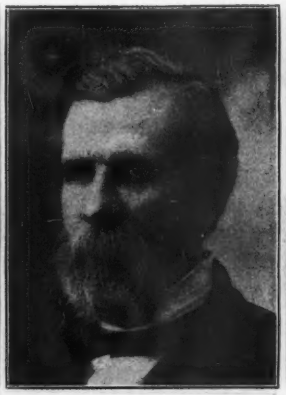


C. W. Earle, M. D., 1889

J. M. G.



John Wright, M. D., 1890



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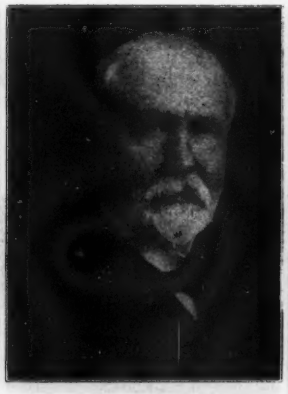
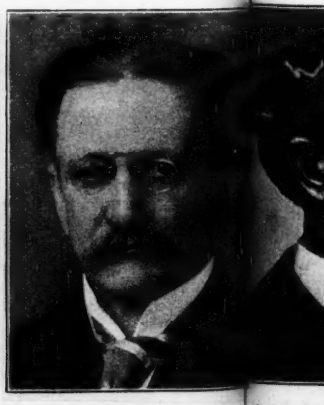


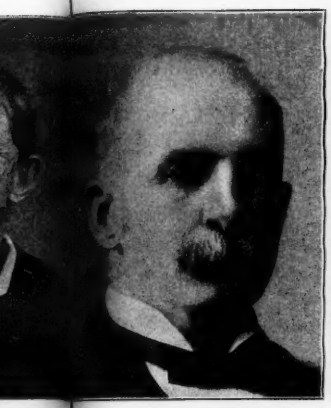
Charles C. Hunt, M. D., 1892



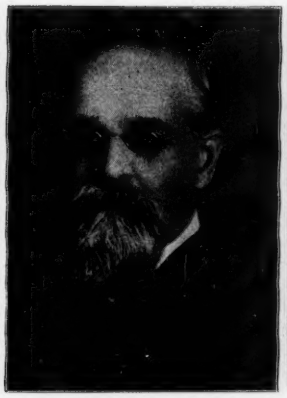
E. F. Ingals, M. D., 1893

J. T. McA

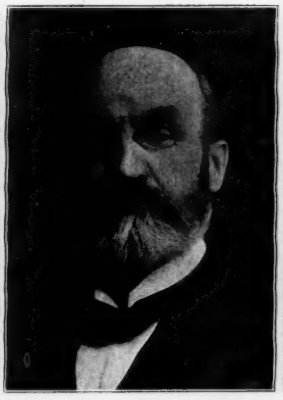
PRESIDENTS



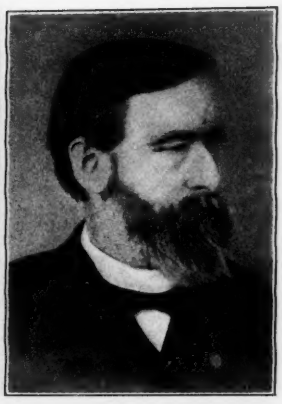
O. B. Will, M. D., 1894



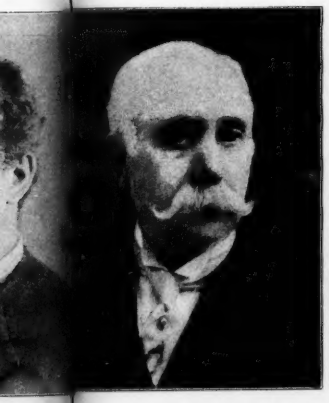
D. R. Brower, M. D., 1895



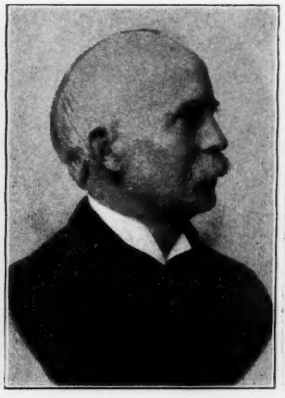
D. W. Graham, M. D., 1896



Albert C. Corr, M. D., 1897

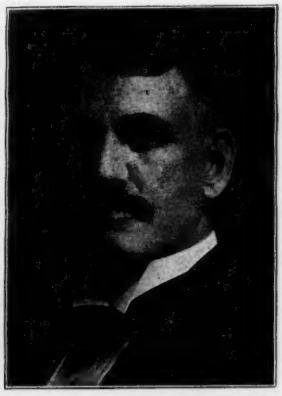


J. M. G. Carter, M. D., 1898

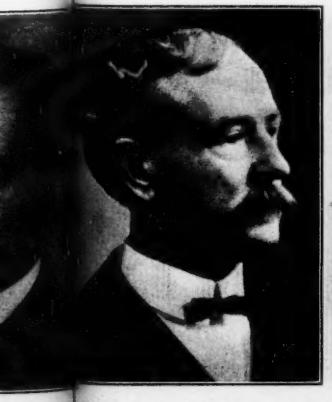


J. T. Pitner, M. D., 1899

Harold N. Moyer, M. D., 1900

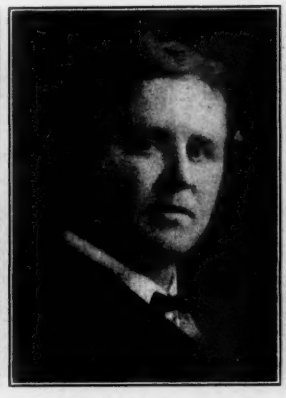


G. N. Kreider, M. D., 1901

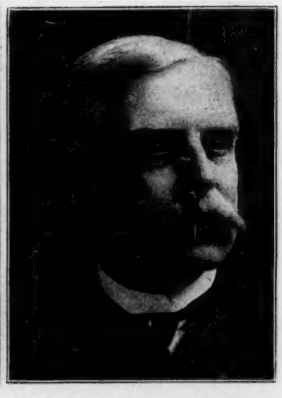


J. T. McAnally, M. D., 1902

M. L. Harris, M. D., 1903



Carl E. Black, M. D., 1904



W. E. Quine, M. D., 1905

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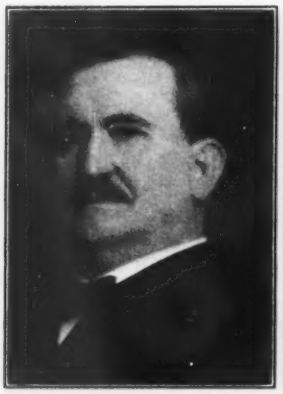
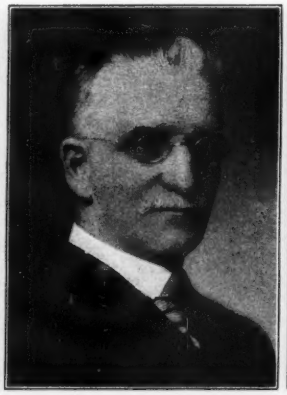
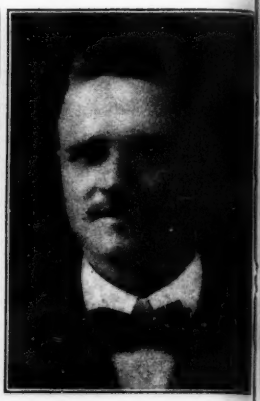


H. C. Mitchell, M. D., 1906

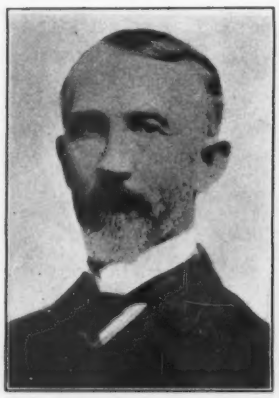
J. F. Percy, M. D., 1907



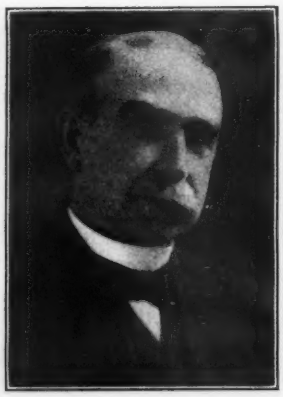
J. W. Pettit, M. D., 1909



J. L. Wiggins, M. D., 1910

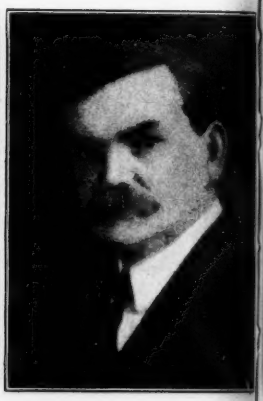


W. K. Newcomb, M. D., 1912



L. H. A. Nickerson, M. D., 1913

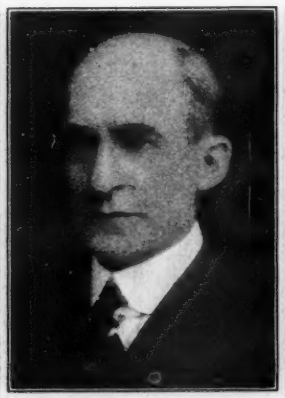
Charles J. Whalen, M. D., 1914



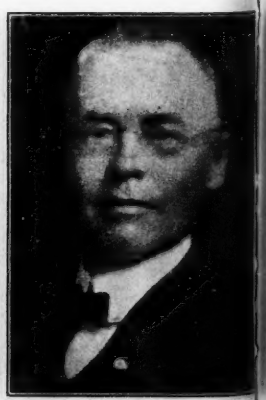
A. L. Brittin, M. D., 1915

Charles W. Lillie, M. D., 1916

William L. Noble, M. D., 1917



E. B. Coolley, M. D., 1918



E. W. Fiegenbaum, M. D., 191

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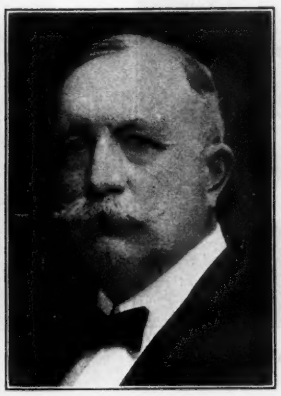
J. W. Van Derslice, M.D., 1920

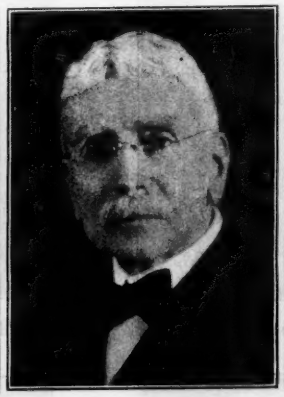


W. F. Grinstead, M. D., 1921

Charles E. Humiston, M. D., 1922

Edwin P. Sloan, M. D., 1923

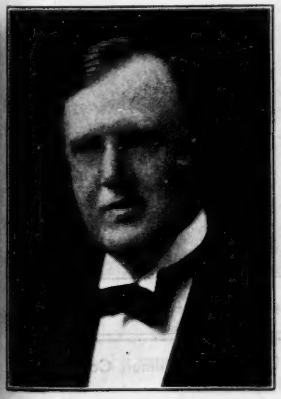
Edward H. Ochsner, M. D., 1924



Lewis C. Taylor, M. D., 1925

J. C. Krafft, M. D., 1926

Mather Pfeiffenberger, M. D., 1927



G. Henry Mundt, M. D., 1928

John E. Tuite, M. D., 1929

Frederick O. Fredrickson, M. D., 1930

William D. Chapman, M. D., 1931

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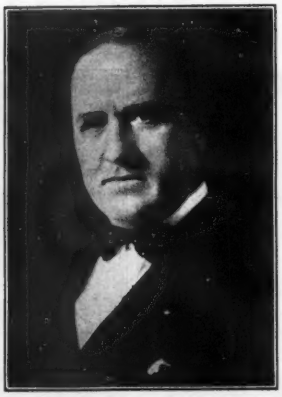
R. Ralph Ferguson, M. D., 1932



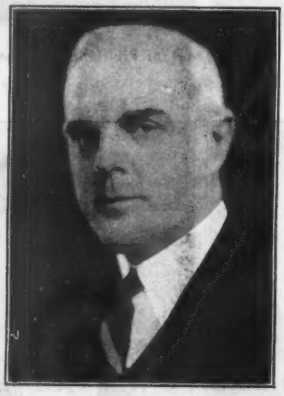
John R. Neal, M. D., 1933

Philip H. Kreuscher, M. D., 1934

Charles S. Skaggs, M. D., 1935

Charles B. Reed, M. D., 1936

Rolland Lester Green, M. D., 1937



Rollo K. Packard, M. D., 1938

Samuel E. Munson, M. D., 1939

James H. Hutton, M. D., 1940

Credit for many of these pictures belongs to Newberry Library; Rush Medical College; University of Illinois College of Medicine; John Crerar Library, Carl E. Black, M. D., of Jacksonville, Illinois; Henrotin Hospital.

We were unable to obtain pictures of the following presidents: Samuel Thompson, M. D., 1851; C. N. Andrews, M. D., 1854; A. H. Luce, M. D., 1864; J. M. Steele, M. D., 1865; S. W. Noble, M. D., 1867; G. W. Albin, M. D., 1871; W. L. Baum, M. D., 1908; A. C. Cotton, M. D., 1911.

Original Articles

THE LEGISLATIVE ACTIVITIES OF THE SOCIETY IS A PUBLIC SERVICE

J. R. NEAL, M. D.
CHICAGO

Two basic principles have governed the legislative policies and activities of the medical profession in Illinois, ever since the Territorial days when interest in this field was first expressed in the form of laws. These two principles are:

1. *The protection and improvement of the public health through organized official effort based upon sound scientific knowledge and good economic practice;* and

2. *The protection and improvement of both individual and public health through the maintenance and elevation of the standards of medical practice based upon the qualifications of practitioners of the healing art. While the results of efforts along these lines redound advantageously to qualified physicians, both principles operate primarily and fundamentally in the public interests. They cause an expansion of public health service, encourage medical research and improved medical education and tend to discourage inferior and unethical forms of practice.*

Upon the initiative of the medical profession, laws creating an official public health agency for regulating the qualifications of physicians, for collecting reports on births, deaths and disease, and for promoting sanitation were enacted in 1817, 1819 and 1825. Unfortunately, these were all repealed. Committees from the organized medical profession unsuccessfully petitioned the General Assembly in 1856 and 1861 to enact similar laws. In 1877, as a direct result of work done by a committee of the Illinois State Medical Society appointed for that purpose, a State Board of Health was created and a Medical Practice Act regulating the qualifications of physicians was enacted. These laws were permanent in character.

Since that time the Illinois State Medical Society has participated actively in legislative matters relating to public and individual health, and has been largely responsible for raising the standards of medical practice which protects the public against gross exploitation by charlatans and ignorant cults. The Society has been influential also in the expansion of public health service on a sound scientific and economic basis.

Rapid development of scientific knowledge during the last quarter of a century; the ever alertness of shrewd minds to exploit half-truths in the medical field to commercial advantage and the changes in social philosophy have compelled the Illinois State Medical Society, in the interests of good medicine and sound economy, to maintain a Legislative Committee upon what is practically a "lobby" basis. The work of this committee has been guided steadfastly by the two basic principles which have traditionally guided the legislative attitude and activities of the medical profession in the State and which are stated above.

Activity of the Legislative Committee during the regular session of the General Assembly in 1939 illustrates very well the general character of its work during the last 25 years. Some 52 proposals relating to the practice of medicine or public health were offered in the form of bills. All were carefully studied, those without merit in the public interest being vigorously opposed and those of potential benefit being endorsed by the Legislative Committee.

Among the more important bills successfully opposed were two classes:

1. Those aimed at lowering the standards of medical practice by the unlimited licensure of unqualified practitioners; and

2. Those which would set up impractical, unscientific and uneconomical official activities in the name of public health service.

Of the first class, two bills would have given to osteopaths—with their insufficient professional education—all of the privileges of regularly qualified physicians and surgeons. Another bill would have encouraged greatly the expansion of the chiropractice system into a field of treatment for which its students are not properly schooled; another would give privileges to the system of naprapathy (despite the fact there is no recognized college teaching naprapathy in the United States), and a third, all forms of drugless healing. *Favorable legislation, in fact, would give broader powers to these drugless systems. Such a step would appear to be definitely retrogressive at a time when strong efforts are afoot to provide better and more extensive medical care to more of the people.*

Of the second class—the impractical proposals offered in the name of public health service—one bill would have required the medical examination of all food handlers at 90-day intervals, a measure that would entail enormous expense on the one hand and that has proved in actual practice to be of no significant advantage in the control of communicable diseases.

Another bill would have legalized the practice of medicine by corporations, a measure which would have commercialized medicine.

Among bills endorsed by the Legislative Committee, and which became law, were measures that require:

1. prenuptial physical examinations for venereal diseases!
2. blood tests of pregnant women for syphilis;
3. the supervision of maternity hospitals by the State Department of Public Health;
4. the expansion of services in the control of pneumonia, syphilis and tuberculosis; and
5. the sanitary control of pasteurized and Grade A milk by the State Department of Public Health.

At previous sessions of the General Assembly the anti-vivisectionists have offered bills time and time again which would have prohibited the use of animals for medical experimental purposes. At every previous session for at least a quarter of a century vigorous efforts have been made toward the passage of laws designed to encourage and expand the practice of cults and quacks and to lower the standards of medical qualifications. Numerous bills offering all manner of schemes that at least legalized the opportunity to exploit the public through commercializing medical and scientific knowledge and bills proposing programs of good public health purpose—but economically and practically unsound—have come before the General Assembly from time to time. The Legislative Committee has fought such measures industriously, not on the legislative floor alone, but by making public the implications and potentialities of each measure.

On the other hand, the Legislative Committee has initiated several legislative proposals for raising the standard of medical practice and has endorsed acceptable proposals put forward by the public health authorities of the State.

Largely because public support is essential to the trend of legislation in medical and public health matters, no less than in other fields, the State Medical Society created a Committee on Health Education. Financed by the Society, this Committee, established at the suggestion of the Legislative Committee, maintains a speakers' bureau; distributes literature; provides exhibits; conducts radio broadcasting programs and uses other efficacious channels for educating the publice in health and medical matters.

This brief review of the character of the work done by the Legislative Committee of the Illinois State Medical Society is offered as evidence that its activities are and always have been, fundamentally, in public interest and for public benefit. While there is an economic side to medicine—since physicians like other human beings must live—the medical profession is primarily a humanitarian calling whose services are devoted to public welfare. It follows, therefore, that laws which operate to protect high standards of medical practice and to encourage improvement in medical and public health practice, operate also in general public interest.

Toward that end the Legislative Committee of the Illinois State Medical Society has steadfastly striven, and will continue to strive.

Sovereign Hotel.

MEDICAL EDUCATION IN ILLINOIS DURING THE LAST ONE HUNDRED YEARS

FRED C. ZAPFFE, M.D.*

CHICAGO

From 1840 to 1940 is a far cry, especially as it concerns medical education. So much has happened by way of progress that it is impossible to review the situation adequately in a short article. Medical education has been a favorite football for unthinking critics, both lay and professional. Medical educators have been condemned for sins of omission and commission but the fact remains that they must be given credit for the many significant advances that have been made in the field of medical education and without being driven to do it.

Medical educators live with medical education. It is their immediate concern. They know, not only what has happened in the past, but what are the needs of the present, and are well aware of the needs of the future. Their sole objective is to give preparation which will enable the fu-

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ture physician to practice his profession wisely and well, in the best interests of the people who may come under his care. Their interests lie not only in the medical school itself, but also in the colleges, the universities and the hospitals, each of which contributes largely to the future success of the physician, who must be an educated gentleman and must know medicine as it should be practiced. Therefore, their interests are spread over a large field in parts of which they cannot exercise jurisdiction without full and complete cooperation.

The rapid and far reaching advances made in medical knowledge are a challenge to keep pace. To meet these advances adequately, frequent changes in plans and procedures must be made almost from day to day. Medical pedagogy began as the result of an intense desire to teach and to prepare men and women for the practice of medicine. Perhaps this desire may, at one time, have been motivated in part by a selfish interest to further personal practice, but it cannot be said in truth that such a motivation exists among medical instructors today. Medical instructors have developed, and, I believe, more rapidly than have instructors in any other field of knowledge. We never have had a college or school of education for medical instructors. Experience has been the only stimulus and guide in the development of medical instructors. It cannot be gainsaid that the result has not been a good one.

One hundred years ago there was only one medical school chartered in Illinois—Rush Medical College, which was organized in 1837. Since that time, forty-three medical colleges have been organized, some good, some bad. Of that number, five survive today: Rush Medical College, now an integral part of the University of Chicago; the College of Medicine of the University of Illinois; Northwestern University Medical School; Loyola University School of Medicine and the Chicago Medical School. Rush will cease to exist as an undergraduate school of medicine in 1942 when it will become the postgraduate school of medicine of the University of Chicago.

Historically it is interesting to follow the rise and fall of all the medical schools which, many of them, have long since been forgotten. Some combined and affiliated until there remain the five schools now in existence. Space forbids even a cursory review of these developments. We must content ourselves with the conviction that out of chaos has come order like unto a Phoenix arising from the ashes. Doubtless, every change is significant of progress and order. Aside from those schools which were founded by individuals for mercenary motives alone and which, in many instances, were declared by the authorities of the State to be fraudulent, there were schools which were founded for motives which cannot be criticized. Out of a combination of such schools came schools which remain today and which are a credit to medical education and to medical educators.

At one time profits accrued to the owners of a medical school. Dividends were distributed at the end of each college year. Today, medical education has become so costly that it taxes the universities, private philanthropy and the states to maintain medical colleges. Billions of dollars are invested in buildings and equipment. Maintenance has become a tax on available resources. And what is the purpose and objective for which these huge sums of money are being spent? To provide the people with the best medical care obtainable.

At the beginning of the one hundred years under discussion, any one who had the desire, the time and the small amount of money required could study medicine. Usually he came with some preparation, having worked for a practitioner of medicine who was styled a "preceptor." Often such service consisted only of taking care of the doctor's horse and buggy and his office. Sometimes the student was permitted to accompany the master on his rounds and to assist in a small way in his office practice. Doubtless he got some worthwhile experience from this service. Many eminent physicians came through this procedure—although not all who did became eminent. However, there was merit in the plan. Unfortunately it has passed completely into oblivion.

At that time the "course" in college consisted of lectures for five months. Then it was lengthened to six months, and later to a second year of six months, which was a repetition of the first six months—a sort of "hammering" home the lesson instructors were trying to teach. In passing it should be said that many of these instructors were very able physicians and excellent teachers. Their work served as an example for

the development of teaching and they can be truly said to have been the prototype of the teachers of today.

The next development was setting up certain requirements—perhaps, somewhat nebulous and not always exacted—for admission to medical school: educational requirements. At first these went little beyond a common school education, an ability to "read, write and figure." Later a little Latin was required, and to meet this requirement, some medical schools gave a course in Latin, socalled medical Latin which was intended to enable the student to write a prescription in good Latin.

Toward the end of the nineteenth century the course in medical college was lengthened to three years of six months each, with a more or less graded curriculum. The subjects taught were beginning to receive a definite place. Combined subjects, formerly taught by one man, such as anatomy and surgery, materia medica and practice, were parted and each given its own time in the curriculum. The increment to medical knowledge was making itself felt. Research, then known as experimentation, was entering the picture by contributing definite knowledge in many fields of medicine. Special subjects were coming into view and men were preparing themselves to practice and to teach these subjects. The whole scheme of medical education was getting more and more complicated and calling for more and more changes in teaching, in courses, in administration.

Finally there emerged the three years' course of eight months and then the four years' course of eight months—which exists today—with another change in the immediate offing, a lengthening of the college year to ten or even eleven months.

The modus operandi of teaching has also undergone a great change. Starting with the system of lectures only, clinical instruction was introduced both through an outpatient department —formerly termed dispensary—and through the surgical clinics, first held, usually, in the college amphitheater, later in a hospital. As knowledge in the fundamental subjects increased, special subjects were allotted less and less time. Formerly these subjects helped to fill the hours of the day and keep the student busy in college from 8 o'clock in the morning until 6 o'clock in the evening with dissections at night. Today the trend is to take up as little of the student's time as possible with didactic work—lectures—and give him more opportunity to read, study, think and reason. The "spoon feeding" system has given away to self-education or "Lehrnfreiheit."

The preparation for the study of medicine is now receiving more of the attention of medical educators than ever before. A definite preparation is insisted on, one which will be helpful to the future student of medicine. From a common school education it went to one, two, three and finally four years of high school. Then one year of college work was added and today the minimum requirement for admission to medical schools is two years of college with certain subject prescriptions. True, most students go far beyond this minimum in order to be better prepared. A few medical colleges require a bachelor's degree with special prescriptions. The aim of all medical colleges is to secure students who are scholastically well prepared, who can master the difficulties of the medical curriculum, and who, it is hoped, will make good practitioners of medicine.

Illinois has done its part in bringing about improvement in medical education and in medical schools. Although once charged as being "the plague spot in medical education" in the United States, it must now be given a prominent place in the sun as having gone as far as any State in advancing medical education. That this statement is true is confirmed by the fact that in 1939, 3,226 individuals made application for admission to Illinois medical colleges. Of that number, 657 were accepted but only 512 enrolled. For one reason or another not all accepted applicants enter medical school. Three years of college work is the minimum for admission to these schools. Doubtless, did physical facilities permit, the enrollment would be much larger than it is. Enrolled students come from every state in the Union, not only from Illinois for the reputation of Illinois medical schools is far flung and well recognized. In facilities, equipment and personnel they stand high among medical colleges. Illinois no longer is "the plague spot in medical education."

The charge has often been made that it is difficult to enter medical college; that admission is granted to the favored and denied to the lowly. That certainly is not true. Every year about 52 per cent. of applicants are admitted and since

admission is based, in large part, on scholarship, it must be apparent that discrimination, for any reason, does not enter in the selection of medical students. In state university owned medical colleges preference is given, as it should be, to residents of the state. But even in these institutions, selection from among residents is based on scholarship. The doors are not thrown open to a resident because he is a resident. He must be able to qualify scholastically and if he does, he is given preference over an equally qualified nonresident. Inasmuch as all state owned medical schools give placement to residents of other states, there is every reason why Illinois should also extend this courtesy. And, it is generally regarded as wholesome to have a little "leaven" in the loaf. It is stimulating to the student body as a whole. Also nonresidents are charged a larger fee than residents, of which the public, as a rule, is not aware. We often hear it said, "Why should we pay for the education of a resident of another state?" We must remember that some other state is doing as much for us. Then, too, not all the resident graduates of our state school enter practice in this state. Some go elsewhere. Therefore, what has been spent in educating these men and women for the practice of medicine is a total loss to us. On the other hand, physicians educated by other states come to Illinois to practice, which balances things very well.

It has been said that too much money is being spent by medical schools. That is not true if one keeps in mind what good is done by such expenditure. Medicine and medical practice are fluent. Advances must be made. It costs money to make them and only those who are well qualified should be supported in their efforts to make these advances, usually spoken of as research. Research is costly, but if it were not made, medicine would be static and the people would not receive the great benefit from medical practice, through prevention and cure, which they should receive. Prevention of disease, as well as cure, has prolonged human life by at least twenty years. Every economist will say that the cost has been justified. Much still remains to be done, and many earnest, ardent men and women are giving their time, their life, to uncover the unknown and make it known to finding new or better means for effecting a cure, to learning how to free mankind from many diseases and how to prolong life.

Illinois has not been a laggard in this work. One need only review medical literature for the past twenty-five years to see how much has been contributed to medical science and the improvement of medical practice by members of the faculties of our medical schools. Their names and their work are known throughout the world. Their findings are accepted as authoritative. They deserve our wholehearted support—spiritual and financial. No money has been wasted.

The agriculturalist cheerfully underwrites any expenditure which will enable him to raise more and better crops, with less labor, perhaps. Why not underwrite the men who are working for better health, less sickness, longer life? After all, what greater boon than a healthy life? Cure is important to the patient, but prevention is far more important. Both cure and prevention, the discovery of still unknown causes of diseases are the objects of study by many investigators whose sole aim is to relieve mankind from illness. Economically this is sound. The medical colleges of Illinois are doing their share to increase the sum of human happines and they are meeting with success. Therefore, they are deserving of support in word and deed. It is not impossible that the greatest contribution to medical science and human welfare may be made by an Illinois medical college before the passage of another hundred years.

HOSPITAL DEVELOPMENT IN ILLINOIS

HOMER F. SANGER

Council on Medical Education and Hospitals of the American Medical Association

CHICAGO

When one goes into the history of the hospitals of Illinois and gets together a lot of interesting material for an article, he must necessarily decide what to omit and what to include. He finds that it is utterly impossible to tell about all the important facts and interesting episodes in hospitals individually unless he is going to write a book. When the space is limited, one cannot more than tell about the beginnings of hospitals —the forces that brought them into existence— their rate of expansion at different periods, and the present status of hospital facilities in the state.

The reader of such a sketch hopes to learn, first of all, which was the first hospital in the

state. That information usually cannot be obtained. The first hospital and, indeed, many of its successors, doubtless passed away before the establishment of an institution which became permanent. Wherever there was any considerable settlement or center of population there would be some sick and injured and provision to care for them, which would approximate hospital service. Hospitals doubtless grow out of the basic human desire to live and to be well.

The different organized groups that have established them have been motivated by certain interests, such as religious, political, social, civic and, possibly, commercial. Hospitals have been about as stable as the organizations that promoted them. They have been as good as the people, and especially the physicians, that have been connected with them. They have been about as permanent and as prosperous as the centers of population in which they have been established.

A rapidly growing state in which the population is increasing throughout its area, as was generally the case in Illinois, will have many hospitals, mainly small ones at first, widely distributed and of greatly diversified types. They will be pared down by the survival of the fittest and by the merging of two or more smaller into one larger institution. Commercial considerations will give way to economic and social considerations.

TABLE 1

When Existing Hospitals in Illinois Were Established and Their Present Ownership or Control

No. of Hospitals Established in Each Decade		Church Related	Nonprofit Association	Individual and Partnership	County	City	State	Corporation for Profit	Federal	Fraternal
1840-49	2	1	..	..	..	..	1	..	..	..
1850-59	2	..	1	..	..	..	1	..	..	..
1860-69	15	5	4	..	1	..	4	1	..	..
1870-79	16	9	1	..	..	1	4	..	1	..
1880-89	20	12	8	..	..	..	..	..	..	..
1890-99	42	13	13	1	..	4	4	4	2	1
1900-09	49	20	15	6	..	3	1	4	..	..
1910-19	62	11	20	9	8	7	2	2	2	1
1920-29	69	12	16	14	13	3	2	4	3	2
1930-39	24	5	8	4	1	3	1	2	..	..
Totals	301	88	86	34	23	21	20	17	8	4

Sometimes a hospital would be reorganized, renamed, in the same building, and sometimes moved to another town. It is not always easy to trace the line of succession—to say when it is the same institution that was established, say, forty years ago. Most hospitals actually are built out of material, staff, personnel, from one or several pre-existing institutions.

The information for this study is based mainly on the reports furnished by hospitals which are now on file in the office of the American Medical Association and other data which the Association has accumulated, particularly in the past thirty-two years.

The 301 registered hospitals at present existing on Illinois soil have been arranged in the order of their establishment (Table 1) by decades from 1840 down to the present time. The table also shows the control, ownership or auspices under which they are conducted.

The two hospitals that date their establishment in the forties are the Jacksonville State Hospital, Jackonville, 1847, and Mercy Hospital Chicago, 1849; and the two in the fifties are the Chicago Memorial Hospital, Chicago, and the Illinois State Eye and Ear Infirmary, Chicago.

It appears that the hospital enterprise, at least the production of permanent institutions, got a strong start by establishing fifteen hospitals in the sixties. These were followed by sixteen in the seventies, twenty in the eighties, forty-two in the nineties, forty-nine in the ninteen hundreds, sixty-two in the teens. And the machinery really went into high gear in the nineteen twenties with the establishment of sixty-nine institutions which are still existing. The thirties produced twenty-four.

TABLE 2

Growth of Hospital Facilities in Illinois 1909 to 1940 According to Ownership or Control

	Hospitals			Beds		
	1909	1927	1940	1909	1927	1940
Federal	3	10	8	555	3,246	5,767
State	13	24	20	11,505	24,363	42,605
County	10	27	23	5,507	5,162	6,192
City	15	25	21	689	2,478	3,167
Church related	70	95	88	6,447	10,334	11,876
Fraternal	1	8	4	60	371	339
Nonprofit associations	72	..	86	4,285	....	8,986
Independent associations	..	115	..	....	9,982	....
Individual and partnership	38	63	34	929	1,452	817
Corporations for profit	6	..	17	312	....	1,356
Totals	228	367	301	30,289	57,388	81,105

As to the groups responsible for these institutions, credit is assigned to churches for eighty-eight, and to other nonprofit associations for eighty-six hospitals. The columns which give these figures indicate that the church claims one hospital in the forties, five in the sixties, nine in the seventies, and in the succeeding five decades

twelve, thirteen, twenty, eleven and twelve, respectively, dropping to five in the decade from 1930 to 1939, inclusive.

Other nonprofit associations started a decade later and increased in a similar crescendo, the crest of the wave being constantly about ten years behind that of the churches. The oldest existing individually owned hospital was established in the nineties, six belonged to the nineteen hundreds, nine to the teens and fourteen to the twenties. Four existing individually owned institutions were established in the thirties, making thirty-four in all.

Among the twenty-three county hospitals in the state is Cook County Hospital, established in 1865. Thirteen, or more than half, were established in the twenties. Eight others in the teens and one in the thirties. Seventeen county hospitals are for tuberculoisis.

City hospitals, twenty-one in number, claim one for the seventies and a small number in each of the latest five decades.

The state government has to its credit a hospital built in 1847, apparently the oldest existing hospital in the state, and it has added one or more institutions each decade except in the eighties.

Of the hospitals incorporated for profit, or at least with profit permitted, there remains one that was established in the sixties, the others being distributed through the nineties and succeeding decades down to the present, when there are seventeen in all.

The federal column shows eight hospitals, and the fraternal four.

TABLE 3

Growth of Hospital Facilities in Illinois 1909 to 1940 Acording to Type of Service

	Hospitals			Beds		
	1909	1927	1940	1909	1927	1940
General	161	234	206	12,054	24,080	27,624
Nervous and mental	22	27	29	15,238	24,877	45,180
Tuberculosis	8	25	27	648	3,195	3,782
All other hospitals	37	81	39	2,349	5,236	4,519
Totals	228	367	301	30,289	57,388	81,105

By 1909 hospital facilities of a permanent character and of excellent to fair quality had been established in eighty-seven cities and towns. The number of such localities had increased to 157 by 1927, and receded to 137 by 1940.

As indicative of trends in the development of hospitals, the average capacity of all the hospitals of the state was 133 in 1909, 156 in 1927 and 270 in 1940. In 1909 the general hospitals averaged 75 beds; in 1927, 103 beds and in 1940, 134 beds.

The total capacity of all hospitals in the state in 1909 was 30,289 beds; in 1927 it was 57,388, and in 1940 it is 81,105 beds and 4,192 bassinets.

Even persons who have been in the midst of hospital development in Illinois will view with wonder the actual growth as shown by figures in tables 2 and 3. The combined facilities practically trebled and, as to actual value, much more than trebled in that space of time; in fact, the hospitals for mental diseases exactly trebled, having grown from a capacity of 15,238 in 1909 to 45,180 in 1940. The general hospitals increased from 12,054 beds in 1909 to 27,624 beds in 1940, and tuberculosis facilities from a capacity of 648 beds in 1909 to 3,782 beds in 1940.

PRESENT STATUS OF HOSPITAL FACILITIES IN ILLINOIS

The 301 registered hospitals of Illinois have a total capacity of 81,105 beds, 4,192 bassinets, and an average census of 66,667 patients. In 1939 there were 78,674 births in these hospitals.

In the year 1939, the total patients admitted to the Illinois hospitals was 681,397. To the seventy-two governmental hospitals went 167,130 patients, and to the 229 nongovernmental hospitals went 514,267 patients.

Of all the persons who went to the hospitals of Illinois in 1939, the general hospitals admitted 91.7 per cent. About the same percentage of admissions went to the general hospitals throughout the country.

In 1931 the general hospitals in Illinois received 88.8 per cent of the patients, while in that year the general hospitals of the whole nation received 88.3 per cent of the patients admitted.

The foregoing figures refer to bed patients and not to outpatients. There is a variety of outpatient service in Illinois, as elsewhere, extending from the regular, organized, departmentalized outpatient departments through the various types of ambulatory service, and including the rather common custom of some physicians who meet their ambulatory patients in the hospital. Sixteen large general hospitals in the cities of the state have well organized, departmentalized outpatient departments, and an equal

number have organized general outpatient services, not departmentalized.

SCHOOLS OF NURSING

With regard to the training of nurses, the hospitals of Illinois seem to have rendered their share of service. There were 125 schools of nursing that were approved by the State Department of Registration and Education in 1926, and they enrolled 5,623 students that year. By 1939 the number of approved schools had been reduced to 104, but the enrollment had in the same time increased to 6,716 students.

THE TRAINING OF INTERNS

When in 1914 the Council on Medical Education made a canvass of hospitals, there were more medical students seeking internships than could be accommodated. Forty-two hospitals, including six mental and four other special hospitals, said that they would accept interns, and reported that they already had 240 interns on their services. In general, the attitude of hospitals toward internships has gradually been reversed, so that during the past few years there is keen competition between hospitals for available graduates of recognized medical schools. The medical and administrative staffs of hospitals have responded nobly to the effort of the Council to improve the quality of intern training. At present sixty-one approved general hospitals in the state are using and teaching 599 interns.

TABLE 4

Hospitals Approved for Training Interns by A.M.A.
Comparing Illinois with Entire United States

Year	Hospitals Approved for Intern Training by A.M.A. In Illinois	Hospitals Approved for Intern Training by A.M.A. In U. S.	Interns in Hospitals Approved by A.M.A. In Illinois	Interns in Hospitals Approved by A.M.A. In U. S.
1914	42	603	240	3,095
1924	43	662	340	3,804
1932	55	691	519	6,181
1940	61	736	599	7,654

In the matter of necropsy performance,—one of the many functions of the teaching hospital, eleven of the approved intern hospitals had a necropsy rate of between 15 to 25 per cent during the year 1939; seventeen a rate of from 26 to 35 per cent; eighteen from 36 to 45 per cent; four from 46 to 55 per cent, and five a rate of 56 to 65 per cent. Beyond this, six obtained distinguishing rates in necropsy performance of 73, 77, 78, 79, 84 and 86 per cent, respectively. These figures are based on 18,803 deaths and 6,250 necropsies.

APPROVED RESIDENCIES IN SPECIALTIES

Early in the twenties there was increasing demand on the part of physicians who had served a general internship to continue their work for additional hospital experience before going into general practice, or as part preparation for the eventual practice of a specialty. By 1927 acceptable opportunities were provided for ninety-seven residents in sixteen Illinois hospitals. The increase, both in the hospitals that have successfully undertaken this work and in the number of physicians accepting these opportunities, have increased with a gradual rapidity, until at the present time thirty-two hospitals afford approved residencies for 350 graduates who have served approved internships. The lists of hospitals that are approved for intern training and those approved for residencies in specialties are maintained by rigid inspection and comparison with exacting requirements by the Council on Medical Education and Hospitals. The requirements include a variety of experience, material and facilities, all of which combine to increase the physician's knowledge and skill, as could be done in no other way.

TABLE 5

Residencies in A.M.A. Approved Hospitals
Comparing Illinois with Entire United States

Year	Hospitals Approved for Residencies in Specialties by A.M.A. In Illinois	Hospitals Approved for Residencies in Specialties by A.M.A. In U. S.	Residencies in Hospitals Approved for Residencies in Specialties by A.M.A. In Illinois	Residencies in Hospitals Approved for Residencies in Specialties by A.M.A. In U. S.
1927	16	270	97	1,699
1931	27	363	165	2,139
1936	23	410	192	2,840
1940	32	555	350	4,709

DEVELOPMENT OF PUBLIC HEALTH SERVICE IN ILLINOIS

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The State Department of Public Health was organized in 1917 when the Civil Administrative Code of Illinois was adopted. Prior to that there was a State Board of Health, created in 1877. An ordinance creating an official public health agency that would have regulated the

qualifications of physicians, collected and compiled vital statistics and promoted sanitation was adopted in 1817 by the Territorial Assembly of Illinois. The first State General Assembly failed to reenact the ordinance.

Similar laws were enacted by the General Assembly in 1819 and in 1825 but were promptly repealed by succeeding legislative bodies, and the first permanent legislation for an official state public health service was enacted in 1877, when the State Board of Health Act and the Medical Practice Act were passed. Both were the direct fruits of a resolution adopted by the Illinois State Medical Society at the annual meeting in Bloomington in 1876:

"Resolved, That a Committee be appointed to memorialize the next legislature on the subject of the appointment of a State Board of Health; and, that with proper modifications, the act by which the Board of Health of Massachusetts was inaugurated be submitted to the same as a basis for the Illinois State Board.

"Resolved, That as members of the State Medical Society, each one shall consider himself bound to urge the propriety of a State Board of Health upon the representative from his district."

Two laws grew out of two very definite and distinct conceptions of the best means of promoting public health: 1. that good doctors are the dominant factor; 2. that sanitation, quarantine and hygiene will produce significant results in improving and preserving public health.

The State Board of Health was made responsible for the enforcement of both laws, a sop to both schools of thought. While a good deal was attempted in sanitation and control of smallpox by vaccination, the board was so limited in knowledge and money that little was accomplished except enforcement of the Medical Practice Act. Vaccination against smallpox was about the only procedure available for practical public health use in the prevention of diseases in 1877 and for a decade thereafter.

Apparently the General Assembly was not greatly impressed with what the board might achieve in health protection except by improving medical practice. The board was allowed $5,000, in addition to such licensure fees as it could collect, during its first two years. The annual appropriation for ordinary expenses did not exceed $10,000 prior to 1900.

The advocates of the "good doctors" theory dominated the situation for forty years. The board spent most of its energy in licensure of physicians and in raising standards of medical education and medical practice, because it was legally required to do so and lacked funds to take advantage of opportunities created by the growth of medical knowledge.

In 1877 bacteriology was just beginning to cast its first faint shadows. The State Board of Health Act anticipated the opportunity of the future and was mostly an empty gesture until after 1917.

During the forty years that the board functioned as the registration agency of physicians the accumulation of knowledge of preventive medicine was so rapid and voluminous as to require an agency entirely for public health service. Within those years the principles of bacteriology first took practicable form. Mosquitoes were found to carry yellow fever and malaria. Antitoxin and toxoid for control of diphtheria, vaccine for control of typhoid fever and rabies; methods for diagnosis of diphtheria, typhoid fever, tuberculosis, syphilis, gonorrhea, malaria and other diseases, the x-ray, an efficient prophylaxis against gonococcic infection of the eyes at birth, the susceptibility tests and other procedures and preparations of superlative importance in controlling communicable diseases were developed to practical usefulness from 1877 to 1917. Pasteurization of milk, chlorination of water and treatment of sewage were introduced and developed. The foundation was laid for scientific knowledge on diet and nutrition.

The realization of the importance of this development in the control of diseases made restless those who believed in promoting sanitation and hygiene as the principal public health activity, and in 1917 the State Board of Health was dissolved and the State Department of Public Health created. Registration was transferred to the new State Department of Registration and Education, created in 1917, and only public health functions were reposed in the State Department of Public Health.

The development of the official public health agency and program falls into four periods: 1877 to 1900, when appropriations for ordinary expenses never exceeded $10,000 per year and the board was on probation; 1900 to 1917 ap-

propriations climbed to $166,589 per year, and the board expanded and commanded recognition, but licensure of physicians still absorbed most of the energy of the board though its public health functions became more important; 1917 to 1935, when appropriations reached $638,294 per year, is the period of maturity when all resources were concentrated on preventive medicine, the people began to demand greater services and the department was regarded as a vitally important agency; the period of national cooperation began in 1935 when funds were made available to Illinois by the Federal government under the provisions of the Social Security Act, and with no change in fundamental policy, the department was able to provide services to a larger proportion of the population. Aggregate funds allotted to the department by the Federal government are:

Feb. 1-June 30, 1936	$ 68,410.83
July 1-June 30, 1936-1937	535,502.29
July 1-June 30, 1937-1938	537,503.00
July 1-June 30, 1938-1939	669,440.00
July 1-June 30, 1939-1940	776,902.00

Appropriations by the state government for the corresponding years were approximately:

1935-1936	$ 677,814
1936-1937	677,814
1937-1938	877,837
1938-1939	877,837
1939 1940	1,276,805

For the current fiscal year the department has from the state and Federal sources about $2,053,707.

During 63 years, almost exactly the average life span of a human being in Illinois today, the appropriated funds available grew from $2,500 to $2,053,707 per year. Variety and magnitude of services and favorable influence on health and life have been of corresponding growth.

The reason for this growth is the application of new knowledge in the prevention of diseases and the promotion of health which falls into three classes—1. sanitation; 2. disease prevention through vaccination and other strictly medical procedures; 3. hygiene, particularly infant and maternal care and nutrition.

STEPS IN ORGANIZATIONAL DEVELOPMENT OF STATE HEALTH SERVICE

From 1877 when it was created until 1915 the State Board of Health functioned as a single administrative unit because of the limited personnel and because the bulk of the work related to the registration of physicians. A diagnostic laboratory had been established, collection and compilation of vital statistics undertaken, investigation of epidemics and quarantine attempted and some work done in sanitation and education but no definite division of specialized activities was made prior to 1915, when personnel and activities were organized into bureaus for specialized service. These bureaus and the personnel in each were:

Bureau	Personnel
Executive (3 administrative)	13
Laboratory (bacteriologist and messenger)	2
Vital Statistics (statistician and 4 clerks)	5
Medical and Sanitary Inspection (5 medical and 3 dairy inspectors)	12
Sanitary Engineering (3 engineers)	5
Lodging House Inspection (chief and 5 inspectors)	8

This shows the strength and the general character of the work, other than the registration of physicians, which was undertaken as late as 1915. No public health nurses were included in the personnel.

In 1917 the board gave way to the department of public health, the registration of physicians was given up and the organizational units were designated as divisions, instead of bureaus; a division of tuberculosis was added, and from this time forward all department personnel was engaged in public health work. Two public health nurses were added to the staff.

In 1919 several new divisions were created and recognized by the General Assembly in the appropriation schedule: Child Hygiene and Public Health Nursing, Social Hygiene, Biological Laboratories, Public Health Instruction, Surveys and Rural Hygiene.

Subsequently divisions of dental health education (1935) and of industrial hygiene (1937) were created. Other shifts have been made so that in 1940 the divisions include the following: Executive, Communicable Diseases, Laboratories, Child Hygiene and Public Health Nursing, Sanitary Engineering, Vital Statistics, Public Health Instruction, Dental Health Education, Industrial Hygiene, Cancer Control, Lodging House Inspection.

Specialized units within divisions which rank almost with the divisions themselves include:

Pneumonia Control, Venereal Disease Control, Maternity Hygiene, Statistical Research, District and Local Health Administration, Community Sanitation.

Of particular significance was a plan adopted in 1936 for localizing the services, which called for 20 district units, each with a full time professional staff headed by a medical officer, made possible by Federal funds for public health work in Illinois. By 1940 all but one of the 20 units had been established, each with a medical officer, a nurse, a sanitary engineer and a clerk.

At the beginning of 1940 the total personnel of the department numbered 597, of whom there are 19 administrative officers, 66 other physicians, 136 nurses and 123 other professional workers such as bacteriologists, sanitary engineers, statisticians, nutritionists. This contrasts with 8 officers and employees of the State Board of Health in 1901 and 45 in 1915.

The type and volume of service undertaken at present by the State Department of Public Health are suggested by the appropriations for the biennium ending June 30, 1941, and by the amount of Federal funds allotted for the fiscal year ending June 30, 1940. These are as follows:

APPROPRIATED BY STATE

Fiscal Years July 1-June 30, 1939-1941

Divisions of the Department:			
I.	a.	General Office	$ 70,470
	b.	Purchase of Chicago Bldg.	125,000
II.	a.	Communicable Diseases	577,580
	b.	Transportation of Venereal Disease Patients	10,000
III.	a.	Diagnostic Laboratory	197,665
	b.	Marriage Law	50,000
IV.		Biological Laboratory	431,774
V.		Tuberculosis	31,400
VI.	a.	Sanitary Engineering	214,520
	b.	Sanitary Water Board Law	50,000
VII.		Vital Statistics	159,757
VIII.		Public Health Instruction	45,500
IX.		Child Hygiene and Public Health Nursing	161,930
X.		Dental Health Education	54,225
XI.		Lodging House Inspection	69,300
XII.		Cancer Control	29,000
Indirect Appropriations:			
		Printing	98,600
		Salaries State Officers	35,800
		Postage	85,500
Emergency Appropriation:			
		Pneumonia Serum	55,588
		Total Appropriations	$2,553,610

ALLOTTED BY FEDERAL GOVERNMENT

Fiscal Year Ending June 30, 1940

Public Health Service:	
a. General Purposes	$364,411
b. V. D. Control	215,386
Children's Bureau:	
Maternal and Child Health	197,105
Total Federal	$776,902

As a specific means of controlling various diseases free distribution of certain biological products were adopted early in the twentieth century, beginning as follows:

1905—Anti-rabic vaccine to poor patients,
1906—Diphtheria antitoxin,
1913—Smallpox vaccine,
1914—Silver nitrate solution,
Typhoid fever vaccine,
1922—Diphtheria toxin-antitoxin (Toxoid substituted later),
1936—Anti-rabic vaccine to all patients,
Convalescent poliomyelitis serum,
1937—Drugs for syphilis,
1938—Anti-serum for pneumonia,
Sulfapyridine for pneumonia,
Sulfanilamide for gonorrhea.

The department manufactures silver nitrate solution, anti-rabic and typhoid fever vaccine, diphtheria toxoid and other products. The volume of biologics, expressed in treatment or test dose units, distributed during the calendar year of 1939 is as follows:

BIOLOGICS DISTRIBUTED

Treatment or test doses	1939	1938
Toxoid, Diphtheria	193,707	193,202
Schick, Diphtheria	445,970	344,760
Typhoid Vaccine	115,508	64,918
Smallpox Vaccine	298,935	512,255
Anti-rabic Vaccine	4,274	5,151
Silver Nitrate	133,736	166,052
Tuberculin	35,840	16,905
Cost—$102,949.17		
Anti-syphilis drugs	1,206,814	
Sulfanilamide	169,150	
Cost—$96,112.23		

RESULTS OF PUBLIC HEALTH SERVICE

The results of public health service are the practical elimination of several deadly diseases, the suppression to a considerable degree of others and improvement of positive health, so that the average life span in Illinois has increased from 45 years in 1877 to 62 in 1940.

In 1880, for which detailed though incomplete mortality statistics were first available, 51 per cent of all reported deaths were among children under 5 years, only 12 per cent were among persons of 50 and over. In 1939 only 7 per cent of all deaths were among children under 5 while 67 per cent were among persons of 50 and over. This enormous saving of young life was due largely to the public health movement.

Diseases against which noteworthy progress has been made include smallpox, diphtheria, tuberculosis, typhoid fever, malaria, yellow fever, diarrhea, pneumonia. The number of deaths attributed to each and the rates per 100,000 estimated population in 1880 and in 1939 are shown in Table I.

TABLE I.—MORTALITY FROM CERTAIN CAUSES

	1880		1939	
Illinois	Deaths	Rate per 100,000	Deaths	Rate per 100,000
Tuberculosis	4,645	150	3,606	45.5
Diarrhea (und. 2 yrs.)	4,600	148	245	3.0
Pneumonia	4,378	142	4,191	52.9
Diphtheria	3,783	123	118	1.4
Typhoid Fever	1,652	54	107	1.3
Malaria	1,114	36	35	0.4
Smallpox	45	1.4	0	0
Total, these causes	20,217	652	8,302	105

Had the rates of 1880 prevailed in 1939, there would have been about 43,000 more deaths from the diseases listed in Table I than occurred.

There are about 10 cases for each death from tuberculosis, typhoid fever, diarrhea and diphtheria. Calculated on this basis there were about 335,000 fewer cases of those four diseases in Illinois during 1939 than there would have been with the prevalence rates of 1880. Illness from malaria and smallpox was likewise at a much lower rate.

Great improvement has taken place in the infant and maternal mortality rates, as shown in Table II.

TABLE II.—INFANT AND MATERNAL MORTALITY

	1881		1920	
Illinois Rates per 1,000 Births	Deaths	Rate	Deaths	Rate
Infants	11,826	219	11,614	84.8
Mothers (puerperal causes)			1,141	8.2

	1930		1939	
Illinois Rates per 1,000 Births	Deaths	Rate	Deaths	Rate
Infants	7,152	55.0	4,525	38.5
Mothers (puerperal causes)	693	5.4	346	2.9

The registration of births in 1881 was so incomplete that the infant death rate cannot be considered complete. Deaths were also incompletely reported, and the number of infant deaths reported in 1881 was greater than in 1920, although the population in 1920 was more than double that of 1881, and the number of births was much greater in 1920. Had the infant and maternal death rates of 1920 prevailed there would have been about 6,000 more infant deaths and about 600 more maternal deaths in 1939 than occurred.

Although the statistics prior to 1918 are incomplete, especially of births, they show a striking reduction of loss of life among the young, largely due to prevention of communicable diseases and improvement in dietary and hygienic practice.

The progress against communicable diseases may be revealed by showing what proportion of all deaths reported were attributed to these diseases as in Table III for 1880 and for 1939.

TABLE III.—PER CENT. ALL REPORTED DEATHS IN ILLINOIS

	1880	1939
Tuberculosis	10.3	4.1
Pneumonia	19.7	4.8
Diphtheria	8.4	0.01
Diarrhea	10.2	0.2
Typhoid	3.6	0.01
Malaria	2.4	0.004
Total these causes	44.6	9.5

To the six diseases in Table III was attributed 44.6 per cent of all deaths reported in Illinois in 1880. In 1939 only 9.5 per cent of all deaths reported were attributed to those diseases.

This is evidence of the enormous improvement in health and life resulting from a movement initiated by the Illinois State Medical Society which has attracted popular support as shown by public interest in preventive medicine and the voluntary health agencies which have contributed to the progress achieved.

Successful programs against syphilis and pneumonia have only begun in Illinois; there is a small beginning at cancer control and improvement of nutrition. Mental health is subject to great improvement.

A great deal of the responsibility for the practical application of preventive medicine necessarily rests on the State Department of Public Health.

ONE HUNDRED YEARS OF PUBLIC HEALTH IN CHICAGO
1840-1940

HERMAN N. BUNDESEN, M.D.
President, Board of Health
CHICAGO

1840—The year 1840 found Chicago with its fourth board of health, appointed by the city council under the act of incorporation which had been passed in 1837. The board consisted of three commissioners, a president and a health officer.

The Chicago Hydraulic Company, a private enterprise, began to construct Chicago's first water-works.

The population of the city was 4,479.

1841—An ordinance passed in May required the attending physician to give a certificate of the age, sex, disease, etc., of the deceased, to the head of the family, who was to give the certificate, before the burial, to the city sexton. This was the first attempt to gather vital statistics.

1842—An ordinance regarding burial of the dead was passed, and land purchased for a cemetery.

1843—The first city hospital was built near the lake shore and North Avenue for smallpox.

The death rate was 1 to 64.78 of the population.

1844—A severe outbreak of scarlet fever caused 306 deaths.

1845—Scarlet fever still was prevalent; $300,000 was spent for a hospital building.

1846—Scavenger service was begun and was given every Saturday morning.

There was much sickness and a free dispensary was opened.

1847—On March 30, Cook County Hospital was opened at North Water and Dearborn Streets, in Tippecanoe Hall.

A private hospital for the insane was opened.

1848—R. G. Ross, city marshal, made public the names of physicians who would vaccinate the poor without charge and a call was issued for all unvaccinated persons to be vaccinated at once. This seems to have been the first cooperative effort of the medical profession and city officials to prevent the spread of smallpox.

1849—Smallpox was prevalent; a district health officer was appointed for each city block, 45 in all, and on April 29 cholera was brought to Chicago by the emigrant boat "John Drew" from New Orleans. Immigrants from Europe also helped spread the disease. There were 678 deaths from cholera during the year, or 1 in 36 of the entire population.

1850—Cholera returned in July, causing 420 deaths during the year. Smallpox was prevalent. The mortality rate was estimated at 46.6 per 1,000. The population was 28,269.

1851—A new city charter gave additional health protection.

Smallpox and cholera were prevalent, and cholera caused 216 deaths.

1852—Cholera claimed 630 lives.

1853—Smallpox was prevalent. The council ordered removal of the pest house farther from the center of population.

Dysentery killed 54.

1854—The number of deaths, 3,834, with 1,424 due to cholera, was larger than ever before.

1855—Smallpox killed 30 and the quarantine placard was introduced with signs reading "Smallpox Here."

There were 147 deaths from cholera.

A city dispensary was established.

1856—The general health was much improved, though typhoid fever became prevalent in September.

1857—The board of health went out of existence because of the absence of alarming epidemics and probably also because of controversy over the staff of the new city hospital.

1858—The death rate from tuberculosis surpassed previous records with a rate of 392.2 per 100,000 population.

The principal causes of death were: tuberculosis 334; croup 188; dysentery 224; scarlet fever 233; pneumonia 77; teething 196; cholera infantum 68; convulsions 63; puerperal fever 45; typhoid fever 49; unknown 66; stillborn 49.

1859—The city hospital was leased to private physicians though city patients were cared for at $3.00 a week.

1860—The board of health and the office of city physician were abolished due to financial depression and the absence of alarming conditions and the street commissioner was charged with the duties of the health officer.

1861—Camp Douglas was established and 30,000 soldiers were mustered into service. The board of police was charged with guarding public health.

1862—Policeman Charles S. Perry became acting health officer.

Diphtheria increased; smallpox was epidemic and there was a marked increase in deaths from all causes.

The city hospital at 18th and Arnold Streets was opened as an army hospital.

1863—Sanitary conditions grew worse. Conditions at the "pest house" were inquired into by the Chicago Medical Society. Frightful mortality occurred among prisoners at Camp Douglas. Smallpox increased and erysipelas was epidemic during the winter.

1864—Deaths from erysipelas and low-grade fevers doubled, smallpox trebled, measles increased fivefold, pneumonia killed many and there was a large increase in croup, diarrhea, and dysentery.

1865—The foulness of the Chicago river and the insanitary condition of the city caused a mass meeting to be held in order to secure action, and a state law was passed defining the duties of the board of police as a board of health and authorizing appointment of a health officer. Sanitary conditions improved.

1866—Cholera caused 990 deaths out of 1,581 cases.

1867—By act of legislature the board of health was recreated, and members were appointed.

1868—Meat inspection was inaugurated at the Stock Yards.

There were 580 cases of venereal disease as against 4,147 of all other diseases treated in civil hospitals.

1869—For the first time attention was given to milk inspection. Adulteration of milk and sanitation of milk depots and retail sales places were the only points investigated.

1870—The first milk ordinance was passed making it unlawful to sell skim milk unless so labeled.

1871—The great Chicago fire occurred October 8 and 9, destroying 18,000 buildings, making 93,000 persons homeless, killing 107 persons. Dr. John H. Rauch was in charge of health work. Records of the board of health were all lost in the fire, including those of births and deaths. There was a high mortality the month after the fire.

1872—An aftermath of the great fire was the death rate of 27.64 per 1,000, an increase of 32.6 per cent. over that of the previous year. Smallpox attacked 2,382 and killed 655. The fatality among children under 5 years of age was the highest ever recorded, cholera infantum taking heavy toll.

1873—Cholera caused 48 deaths. Smallpox killed 517 of the 1,766 it attacked.

1874—The new smallpox hospital was completed at 26th Street and California Avenue.

There were 9,794 births registered.

1875—Much vaccination was done, especially in schools and only 15 cases of smallpox were reported.

1876—The department of health was created, superseding the board of health. The greatest epidemic of scarlet fever in the history of the city occurred.

1877—Reporting of contagious diseases by physicians was first enforced. Scarlet fever cases were required to be placarded.

1878—Twenty-seven indictments were made of operators of slaughtering and rendering plants for maintaining public nuisances.

The highest death rate to date from whooping cough was recorded: 53.8 per 100,000 population.

1880—The diphtheria death rate surpassed all previous records with 290.7 per 100,000 population.

1881—A smoke control ordinance was passed.

A severe smallpox epidemic occurred, there being 2,997 cases and 1,180 deaths.

1882—Smallpox continued epidemic until September with 3,611 cases and 1,292 deaths. The department of health performed 110,540 free vaccinations. Immigrants suffering from smallpox arrived daily. Immigrant inspection was undertaken by the national board of health in June.

1883—The first course of lectures on germ theory of disease was given in the Chicago Medical College by Dr. H. Gradle.

1885—All of the 140,000 children attending schools were examined and found to be protected from smallpox.

First attention was called to flies as carriers of disease, by Dr. F. W. Reilly in an editorial in the *Morning News*.

1889—Rules were promulgated by the department of health regarding drainage and plumbing. Five women inspectors of tenements were appointed.

1890—A severe outbreak of influenza began in January and continued until April.

1891—The highest typhoid fever death rate in the history of the city was recorded, 173.8 per 100,000.

A comprehensive plumbing ordinance was passed.

1892—Diphtheria, typhoid fever and typhus became reportable diseases.

1893—The World's Columbian Exposition was visited by 30,000,000 people.

The first public bath house, the Carter H. Harrison, was established at 759 Mather Street.

There were 140 cases of smallpox with 23 deaths. The death rate from tuberculosis was unusually high. The highest rate of deaths from violence was recorded, 151.7 per 100,000 population.

1894—Smallpox was epidemic with 2,332 cases and 1,033 deaths; 1,084,500 vaccinations were performed.

A circular of information on hot weather care of babies was first issued by the department of health in June.

The municipal laboratory was equipped to make analyses of milk, relieving the private laboratories of this work. In September examination of diphtheria cultures was begun.

1895—The first diphtheria antitoxin was issued on October 5 and a corps of antitoxin administrators was appointed.

Daily analysis of the water supply was inaugurated.

1896—Physicians were given the responsibility of quarantining cases of contagious disease under their care.

1898—The department inaugurated a system of reporting births by postal card, which was continued for three years.

During the Spanish-American War soldiers with typhoid fever were brought to Chicago hospitals.

1900—The department of health published a study of the increasing span of life in Chicago, and demonstrated that the average span has more than doubled in a generation, the average for 1898 being 29.4 years as compared with 13.9 years in 1869.

The department was awarded a gold medal at the Paris Exposition.

1901—An ordinance was passed prohibiting spitting in public places.

"State of City's Health" was published every week in newspapers.

Free bathing beaches were opened, the expense being borne by subscriptions by philanthropic citizens.

1902—There was a severe outbreak of typhoid fever in West Side river wards, due to pollution of water supply "wells" at the pumping station.

Fourth of July "Dont's" were first promulgated by the department of health.

The department started publication of a weekly bulletin, *"State of Chicago's Health."*

1904—Country dairy inspection was inaugurated, the work being mainly educational.

The lowest death rate from all causes attained in the city to date was 13.85 per 1,000 for the year; the diphtheria rate being 21.5 per 100,000 population.

1905—The Thirty-ninth Street intercepting sewer was opened in December, following which there was a marked decrease in the typhoid fever death rate.

An act of legislature extended free Pasteur treatment to poor persons to prevent rabies.

Free distribution of antitoxin was resumed.

1906—The Chicago Society of Social Hygiene was organized.

High price of antitoxin was broken. An arrangement with the Memorial Institute of Infectious Diseases lowered the price of antitoxin.

1907—The practice of allowing physicians' responsibility for quarantine was discontinued.

A severe epidemic of scarlet fever occurred during the winter, owing to infection of the milk supply in the country. There were 2,058 cases of the disease in January.

Reporting of tuberculosis was enforced. The school nursing service was inaugurated. An ordinance provided for the heating and ventilation of street cars.

1908—One hundred physicians were sent to the congested districts during July and August to instruct mothers in the care of babies.

1909—The baby welfare campaign was carried on by house-to-house visiting by department of health nurses.

1910—School dental service was inaugurated by the Chicago Dental Society.

New milk standards were applied to ice-cream.

A municipal venereal disease clinic was opened and maintained about six months in the Iroquois Memorial Hospital, being conducted by a volunteer staff.

Dispensaries were required to report venereal diseases.

Moving pictures were used for health education.

No deaths occurred from smallpox since 1905.

1911—Ordinances prohibited common drinking cups and common roller towels.

The department of health started giving the Pasteur treatment for rabies, and anti-typhoid vaccinations at the Iroquois Memorial Hospital.

The department laboratory began making Wassermann tests.

1912—A new ordinance required all milk to be pasteurized unless produced on inspected farms, and required that milk be refrigerated in transit.

1913—Scarlet fever was prevalent, with 10,600 cases and 906 deaths. Diphtheria attacked 8,593 persons and killed 952.

Four infant welfare stations were established by the department of health.

Of the three food-borne outbreaks of typhoid fever, two were due to milk infection, and the other to a carrier working in a downtown restaurant.

1914—This was the first year in which the cases of pneumonia reported exceeded the number of deaths from the disease.

The department started distribution of silver nitrate solution for preventing blindnes in newborn babies.

There were 68 cases of typhoid fever traced to milk infection.

The Municipal Tuberculosis Sanitarium was opened.

1915—Following the Eastland disaster on July 24, the department of health immediately immunized against typhoid fever those who had been immersed.

The typhoid death rate was 5.3 per 100,000 population.

The death rate of children under one year of age was lowest on record, 2.53 per 1,000 population.

1916—An outbreak of infantile paralysis caused 34 deaths out of 254 cases. It was the policy to hospitalize all cases. The Research Commission on Infantile Paralysis was appointed in August.

1917—New ordinances required: reporting and treatment of venereal diseases; residences to be screened against flies; stables and barns to be screened. Another made it unlawful to permit weeds to grow on vacant lots.

Immunization against diphtheria with von Behring's toxin-antitoxin was begun in the public schools and institutions.

There were 292 cases of smallpox.

1918—Influenza became a reportable disease on September 16. On September 21 the pandemic of influenza reached Chicago, attaining its maximum on October 17 with 381 deaths from pneumonia and influenza on that day.

The lowest typhoid death rate was recorded, 1.4 per 100,000 population. This rate was lower than that of any other city in the United States having a population of 100,000 or over.

Tuberculosis had the lowest death rate ever recorded in the city, 146 per 100,000 population. The lowest death rates for scarlet fever, 1.8 per 100,000 and for measles, 2.4 per 100,000, were also recorded.

1919—In January the Department of Health won its first case in the prosecution of landlords for failure to supply sufficient heat to tenants.

1920—The right of the department to quarantine carriers of contagion was upheld by the Superior Court of Cook County.

On May 7, a curled hair factory was closed on account of five deaths from anthrax among its employes.

On April 7, an ordinance was passed providing for the inspection of ice cream factories.

Terminal disinfection in scarlet fever and diphtheria was discontinued on August 1.

1921—This was the fifth successive year in which Chicago had the lowest typhoid fever death rate of any city in the United States of more than 500,000 population, with a rate of 1.1 per 100,000.

There were 246 cases of smallpox with four deaths, and 73,764 cases of communicable diseases were reported for the year.

The general death rate from all causes was 11.08 per 1,000 of population.

1922—In February an Illinois Supreme Court decision ruled that the commissioner of health had no legal power to make rules and regulations, and therefore could not quarantine typhoid carriers.

There were 95 cases of smallpox with 15 deaths.

Eighteen new infant welfare stations and five prenatal stations were established.

1923—The commissioner of health appointed a committee on prenatal care in June. This marked the first concerted effort to coordinate the activities of all agencies doing prenatal work in Chicago.

Inspection of summer camps for children was inaugurated, with complete cooperation by the various organizations operating out-of-town camps for Chicagoans.

From October 13, 1923, to January 24, 1924, an outbreak of typhoid fever spread in the dis-

trict supplied by the Hyde Park Crib, and the waters along the south shore were found to be contaminated with sewage following heavy rains.

1924—A system of making hourly tests for residual chlorine in the discharging mains of the various pumping stations was begun in March.

On January 1 a milk strike was declared by milk producers because of inability to agree on the price with distributors.

Restaurants were required to serve milk in bottles or urns beginning in March, so that butter fat might be equally distributed in bulk milk served.

Deaths from diarrheal diseases in children, measles, diphtheria and croup reached the lowest rates they had ever attained.

1925—Conferences for care of pre-school children were inaugurated. Department of health nurses began periodical visits to homes of newborn babies once a month, continuing until the child was a year old.

The department of health began vigorous enforcement of the provisions of the state law requiring registration of births within ten days after birth.

Inspections of drinking fountains resulted in orders to install sanitary types in place of insanitary ones.

Much smoke abatement work was done during the year.

1926—On January 13 the city council passed an ordinance creating a board of health with five members to be appointed by the mayor.

On April 1 it was required that all milk sold in Chicago be obtained from tuberculin tested cattle.

A comprehensive study of air pollution by carbon monoxide in the streets was undertaken by the bureau of sanitary engineering and bureau of laboratories.

1927—A survey of the Chicago Department of Health, made by a representative of the American Public Health Association on the basis of work done during 1926, gave the department a perfect score on the reporting and keeping of records of communicable diseases; control of diphtheria, typhoid, smallpox, scarlet fever, ophthalmia, and venereal disease; and diagnostic surveys.

The use of toxic shoe dyes was prohibited because of alleged poisonings in 1926.

1928—Observations on defects in hospital plumbing and sterilizers were made, revealing an important cause of post-operative infections. The beneficial effects of these observations reached all parts of the world.

1929—An ordinance licensed and regulated the use of poisonous gases for fumigating.

An outbreak of food poisoning was due to the use of cyanides for polishing of silverware.

Two cases of botulism with one death occurred, following the ingestion of imported canned onions.

Epidemic cerebrospinal meningitis was more prevalent than in any year since 1912, with 216 deaths out of 387 cases.

1930—An intensive drive against diphtheria begun on September 8 lasted until November 26, 400,219 toxin-antitoxin injections being given during the campaign.

Infantile paralysis was unusually prevalent, with 191 cases and 25 deaths.

1931—During the autumn carbon monoxide gas escaping from defective installations of gas water heaters caused 46 cases of asphyxiation.

In December an ordinance established a board of health of three members.

1932—An ordinance was passed increasing the membership of the board from three to five.

An intensive campaign for the eradication of diphtheria was carried on by a staff of 300 nurses with a supervising nurse and two motor buses, equipped for giving diphtheria inoculations, with physicians in charge. Physicians were sent to homes of the indigent and of mothers who could not go to the welfare station. Buses were furnished to carry mothers to and from the stations. There were 1,266 cases of diphtheria and 68 deaths compared with 154 cases and 9 deaths the year following the campaign.

1933—Inspection of tourist camps located in the city was begun May 15 to see that proper sanitation was maintained.

In June an outbreak of amebic dysentery began. There were 1,409 cases, scattered in 43 states, the Territory of Hawaii and three Canadian provinces and 98 deaths. This was the first recognized water-borne epidemic of the disease in a civilian population.

Its cause was traced to water contaminated through faulty plumbing.

On December 5 the board of health, because of several cases of poisoning from eyelash dyes,

issued an order prohibiting the use of dyes containing paraphenylenediamine.

There were 12 deaths from typhoid fever, the lowest number so far recorded, giving a death rate of 0.33 per 100,000 for this disease. Sanitary surveys and inspections were made during A Century of Progress exposition.

1934—In February a plumbing survey for cross-connections in hotels and mercantile buildings was begun to prevent future amebic dysentery outbreaks.

On April 24 an ordinance was passed permitting the addition of vitamin D to milk.

As a result of drinking from contaminated water supply at the Union Stock Yards fire, May 19, 69 persons contracted typhoid fever, 11 of whom died.

A project was begun in July to inspect and develop for demolition, useless, unsafe and insanitary buildings.

No cases of smallpox were reported during 1934, the first year this had occurred since 1900.

1935—A milk ordinance required that only Grade A milk and milk products be sold in Chicago.

An intensive program in infant welfare work was carried on. The nurses of the health department were given a course in the care of premature infants. Elaborate measures were inaugurated for the care of premature infants. On April 12 a mother's milk station started operating at the health department offices, to supply breast milk to premature, sick, or debilitated infants whose parents could not afford this expense.

In November a survey of occupational morbidity and mortality was begun in the metropolitan area, by the Chicago Health Department in cooperation with the United States Public Health Service and the Works Progress Administration.

There were 24,199 reported cases of measles, the highest ever recorded. Typhoid fever set an all-time low record with 69 cases.

1936—Chicago had the lowest infant mortality rate of any of the large cities of the United States in 1936 with 38.5 per 1,000 live births.

Note: Infant mortality rate figured on number of live births, reliable birth report figures being available.

There were 210 deaths from sunstroke and heat exhaustion as against 11 deaths from the same cause in 1935.

The birth rate declined to approximately 13.7 per 1,000 population, as compared to 14.2 in 1935.

About 1,000 premature infants were under supervision, and two additional premature stations were opened, making 31 conferences available each week.

One baby lost its eyesight because of ophthalmia neonatorum.

1937—The death rate from all causes was 10.3 per 1,000. There were 36,978 deaths in the estimated population of 3,607,000.

There were 10 deaths from typhoid fever, 12 from measles, 61 from scarlet fever, 39 from whooping cough, 84 from diphtheria, 261 from influenza.

A housing survey project was conducted in which 70,566 buildings were inspected.

There were 49,633 live births, a rate of 13.8 per 1,000 population.

1938—Registration and attendance at prenatal and infant welfare conferences improved.

Nearly a quarter million children were examined for dental defects and were referred to the family dentist, or, if unable to pay, were cared for in the board of health dental clinics.

The general death rate, 9.7 per 1,000 population, was the lowest ever attained, as were also the infant death rate and the maternal death rate, with 33.7 per 1,000 live births and 2.7 per 1,000 live births, respectively.

The birth rate with 51,660 births was 14.3 per 1,000 population.

Deaths from diphtheria decreased approximately 20 per cent. since 1937; from scarlet fever, 15 per cent. There was 1 death from infantile paralysis, a decrease of 97 per cent.

1939—There was a 10 per cent. decrease below the previous all time low record attained in 1938 in infant mortality, with 31.3 deaths under one year of age per 1,000 live births.

The mortality rate increased slightly over the previous year, being 10.0 per 1,000 population, as compared with the all-time low rate of 9.7 in 1938. The death rate of typhoid fever, 0.2 per 100,000 population, was an all-time low record for Chicago, and one of the lowest in the world.

Attendance at prenatal conferences increased over 6 per cent.

Approximately one-quarter of a million school children were instructed or examined through the dental hygiene program.

Over 200,000 persons voluntarily took blood tests.

A United States Public Health Survey gave Chicago's milk supply a grade of 97 per cent., one of the best on record.

DEVELOPMENT OF THE DIVISION OF SANITARY ENGINEERING OF THE STATE DEPARTMENT OF PUBLIC HEALTH

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By 1915 the need for full time systematic engineering was so apparently a necessity to the State Board of Health that the legislature appropriated funds for the establishment of such a division with a chief engineer, 1 assistant engineer for field work, 1 for water and sewerage laboratory work, a stenographer and clerk.

Illinois was fortunate in having this division organized by an engineer who came from the position of chief engineer of another state board of health and had served as assistant engineer and chief engineer to two other boards of health. Upon his voluntary resignation in 1920, he was succeeded by the principal assistant engineer who continued as chief until his death in 1935. The then principal assistant engineer who had been in the state service since 1925 succeeded him and thus the division has been able to develop and function progressively.

An integral part of modern public health activities, environmental sanitation plays a big part as to water supplies including purification, sewerage including sewage treatment, stream pollution prevention and abatement, milk pasteurization and dairy sanitation, camps, rural school sanitation and control of disease carrying insects such as mosquitoes and flies. These are all functions of the division of sanitary engineering.

Later legislatures have provided for expansion of the division so that it is now comprised of 1 chief sanitary engineer, 13 assistant sanitary engineers, 5 milk sanitarians, 2 swimming pool sanitarians, 9 water and sewage bacteriologists, chemists and laboratory helpers, 2 engineering assistants, 12 clerks and stenographers. In addition, the Federal government through its social security program of public health work has helped to provide 18 sanitary engineers for field work. Since the establishment of the division, many new public water supplies, sewerage systems, milk pasteurization plants, swimming pools and industrial waste treatment units have been installed and millions of dollars have been spent on improvements to older systems. Plans for the majority of these improvements have been reviewed by our engineers. There has been a decided decrease in the typhoid fever death rate and there has been no epidemic of typhoid or other intestinal illness caused by a water supply that has been approved by the state department of health based on engineering studies and laboratory examinations. No diseases that may be transmitted through milk have been attributed to milk from an approved pasteurization plant. A vast amount of work has been done on sewage and industrial waste treatment to improve stream sanitation.

In 1925 the legislature passed a milk pasteurization law to be enforced by the State Department of Public Health. The engineering division through repeated inspections and investigations and cooperation with milk plant owners has brought about a change in milk pasteurization so that any one may use milk labeled "pasteurized" with reasonable assurance that the milk is free from any disease-causing organisms.

Prior to 1918 there was little sanitary control of water in drinking water tanks on trains and the handling of such supplies often exposed the water to contamination. Since that time annual inspections and analyses by this division for the U.S.P.H.S. has eliminated sources of supplies of doubtful quality and improved water handling equipment, so that drinking water supplies on all common carriers are reasonably safe and clean.

In 1915 there were about 66 sewage treatment plants and since that time this has increased to 265, serving a state population of 5,417,500. The installation of these plants has

provided better sanitary facilities within municipalities and has helped protect streams from pollution. The greater provision of sewers and sewage treatment is due largely to passage by the legislature of the Sanitary Water Board law in 1929 that gave authority for control of pollution of surface and underground waters to a board consisting of the directors of the following departments of state government: public health, conservation, public works and buildings, agriculture, and a representative of the manufacturing interests, appointed by the governor. The Chief Sanitary Engineer of the State Department of Public Health acts as the technical secretary of this board. All complaints of pollution are investigated by the engineering staff. This board has done notable work and has seldom had to envoke a penalty for violations of orders. In the majority of cases, persons, municipalities, industries, found causing pollution of water courses have voluntarily proceeded with the necessary engineering structures to prevent further pollution. Stream pollution surveys have been conducted by division engineers of all the streams in Cook County, Fox River Valley, Illinois River, Wabash River and other minor streams in the state with a reduction of the pollution of these watercourses.

In 1915 there were approximately 400 public water supplies in Illinois, several coming directly from surface sources without any purification and none providing equipment for removing either the iron or minerals that cause hardness. Since 1915, 243 public water supplies have been installed. All surface supplies used for drinking are provided with purification equipment. In the past ten years the tendency has been to provide units for the removal of iron and minerals making it more desirable for domestic purposes. At the present there are over 75 municipalities with equipment to remove iron or excessive hardness. This is all due largely to this division.

The 1930 swimming pool law gave the department of health power to set up rules and regulations for the design and operation of all pools. The swimming pool program has gained national attention and has resulted in considerable improvements in facilities. A scoring system based on sanitation, construction, location, equipment, water quality, etc., has done much to envoke a keen rivalry among the 500 or so pools to improve their grace and sanitary conditions.

In 1915 practically no effort was expended on rural sanitation such as school facilities, county fairgrounds, recreational camps, tourist camps or industrial waste pollution. Today considerable effort and time is being given to these matters in order to provide sanitary facilities for school children and particularly the rural citizens. It is interesting that 65 per cent of all rural school toilet facilities and 85 per cent of the water supplies in rural schools are unsatisfactory. With the help of county superintendents and school directors, considerable improvement has been made in these conditions. Industrial waste pollution abatement has made many of our streams fit for fish life, cattle watering and recreational purposes.

In 1918 there was no P.W.A., W.P.A., C.C.C., or F.H.A. and each of these has required considerable time of this staff in review and consultation relative to the governmental work in their various fields.

Since 1934 the division has sponsored a W.P.A. project on malaria control, which has resulted in the drainage of large areas where malaria carrying mosquitoes breed. Considerable education in mosquito control projects is carried on in the various communities of the six mosquito abatement districts formed under the state mosquito abatement law.

The division has supervised a W.P.A. project for community sanitation under which over 13,000 sanitary pit privies in rural and unsettled areas have been built since 1934.

In 1915 the number of inspections made by the sanitary engineers for all purposes was about 200, that in 1938 was 5,317. The increase is due to modern living with its greater dependence upon public health measures. In 1918 the typhoid death rate per 100,000 population was 8.2, whereas, in 1938 it was 0.7. Environmental sanitation has contributed considerably to this saving of life. Infantile diarrhea in children under 2 years, which in some cases has been attributed to unpasteurized milk, in 1925 showed a death rate of 31.1, in 1938 it was 5.4.

The educational program of the division, cooperating with other divisions, has increased greatly. Under this program articles are prepared for the various department organizations, civic organizations are addressed, state and national meetings doing work allied with public health are held and assistance is given in preparing department exhibits at the state, county and local fairs. Much educational work is carried on by correspondence; over 12,000 letters were written in 1939, besides a large number of laboratory form letters including those regarding milk pasteurization plants. Approximately 10,000 pamphlets giving information on improvement of environmental sanitation are mailed out yearly.

To aid in the education of water, sewage, swimming pool and milk pasteurization plant operators the department holds sectional meetings, an annual state-wide conference and short course, issues quarterly publications to this personnel to promote better operation of these utilities.

In addition to the functions performed by the engineers, this division provides laboratory services which include bacteriological, chemical and biological analyses of samples of water from public, institutional and private, school, camp and swimming pool water supplies; analyses of sewage, industrial waste, streams, ice, filter sand, and chemical analyses of such other materials as may be necessary to systematic performance of the duties of this division and of the sanitary water board. The laboratory staff reports results of analyses, keeps in close touch with field data and assists in interpretation of laboratory analyses. In 1918 about 200 samples were analyzed, in 1938 about 12,931.

The personnel of this staff is available for emergency in providing safe water supplies, sanitary sewage disposal and environmental sanitation during disasters such as floods and tornadoes. The two greatest disasters since the organization of the division were the tornado on March 18, 1925, which swept across southern Illinois and the Ohio river flood in January, 1937. Although environmental sanitation during these disasters has commanded public attention, the greatest good has been accomplished by the regular, continuous and systematic attempt to make water supplies adequate, clean and safe, to secure sanitary disposal of sewage in order to keep streams undefiled and clean, to improve the quality of milk supplies, to make swimming pools and bathing places safe and clean and to assist in all those activities of a modern public health department that involved knowledge of sanitary engineering.

DEVELOPMENT OF DIAGNOSTIC, BIOLOGICAL AND RESEARCH LABORATORIES OF THE STATE DEPARTMENT OF PUBLIC HEALTH (A HISTORICAL OUTLINE)

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The history of the Division of Laboratories of the State Department of Public Health is one of expanding usefulness to the medical profession and thus to the entire state. The first laboratory was established in Springfield by the State Board of Health and began operation in the fall of 1904 under unostentatious circumstances, supported by funds intended for another purpose.

During its thirty-five and one-half years the specimen-volume has increased several hundredfold and types of regularly performed examinations from four to more than twenty.

Diagnostic service during the first five years consisted of examination of throat cultures for diphtheria bacilli, sputum for tubercle bacilli, blood for typhoid agglutinins (Widal test), and blood smears for malarial parasites. In 1909 examination of animal heads in suspected rabies was begun. During the World War and in the years immediately following, a country-wide increase of interest in diagnostic laboratory work occurred, largely due to services required by the army and navy. In the laboratories of this department, between 1917 and 1920, the work was extended to include Wassermann tests on blood and spinal fluids, dark-field examinations for Treponema pallidum, examination of pus for gonococci (1917); feces, urine and blood for typhoid bacilli, feces for dysentery bacilli, spinal fluids for meningococci and typing of pneumococci (1918); complement fixa-

tion tests for tuberculosis and gonorrhea, colloidal gold tests and diphtheria virulence tests (1920).

The division has always adopted new procedures and policies as soon as their superiority and reliability became evident. The Kahn test was compared with the Wassermann test and when found to be superior was adopted (1926) as the standard. Illinois was the first state outside of Kahn's own state of Michigan to recognize the merits of his new method.

In order to give prompt diagnostic service to the whole state branch laboratories were established in 1915 in Chicago and Mt. Vernon. Branches were set up in Urbana (1916), Galesburg (1916), Rockford (1917), Moline (1918), Ottawa (1920), East St. Louis (1922), Decatur (1924), Palestine (1925), Carbondale (1925), Kankakee (1927). Some of these were maintained only a short time and only three have remained in continuous operation to the present: Chicago, Urbana and Carbondale. The Galesburg laboratory was reestablished in 1938.

The early work of the branches was handicapped by a lack of sufficient funds and all of them, from 1915 to 1925, were maintained by subsidizing local laboratories. Although it was originally intended that they furnish a general diagnostic service, it was necessary to restrict their program to diphtheria diagnosis. Diphtheria was a statistically important disease in those days. From these have developed the four well-equipped branches which furnish complete diagnostic service to Chicago, Champaign, Carbondale, Galesburg and surrounding territories. The Carbondale laboratory (1925), set up in an emergency primarily for tornado relief, was continued as a permanent laboratory for general diagnostic work. In 1927 the Chicago diphtheria laboratory became the Chicago Branch laboratory rendering the same diagnostic service as that provided by the main laboratory. The last diphtheria laboratory was discontinued in 1932. The present policy is to maintain a few well-distributed branch laboratories providing complete and dependable service.

Much of the diagnostic work is done in municipal and private laboratories over which the department of public health exercises no legal control. Nevertheless, through years of co-operation the division of laboratories has established standards in some of the most commonly employed procedures with their hearty support. Standardization has assumed such importance that a co-ordinating laboratory was set up in 1937 to examine those laboratories desiring to be on an approved list. These are inspected and frequently examined as to accuracy in diagnosis by means of check specimens. Most of the larger laboratories and many of the smaller ones have met the standards for the performance of blood tests for syphilis, examination of smears for gonococci and typing of pneumococcal infections.

Although the services of this division are mainly diagnostic, research and the production of biologicals constitute an important part of its program. The manufacture of biologicals was officially recognized by the General Assembly in 1919 as a legitimate and necessary function but failure to provide the facilities made it impossible until about six years ago. All of the typhoid vaccine, rabies vaccine, diphtheria toxoid, Schick test toxin and silver nitrate solution which are distributed free by the department of public health are manufactured in our own plant and a number of other biologicals employed in diagnostic procedure are prepared for use in our laboratories and in those on the approved list. This saves the state approximately $100,000 annually at the present and enables us to maintain our own standards in production. Limited plant facilities stand in the way of extending this service to other biological products.

Special mention should be made of the trailer, fully equipped as a laboratory, which can be dispatched on short notice. It has rendered important service in epidemics and situations where local laboratory facilities were lacking or inadequate. The mobile laboratory is a symbol of the spirit of the whole division and of the entire department—readiness to meet any health emergency.

A CENTURY OF PATHOLOGY

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When the Illinois State Medical Society was founded one hundred years ago, Pathology as a highly developed science was unknown. Medical students obtained their knowledge of the human body and disease through lectures, dissection and clinics. Until about 1890 chemistry was the only subject which provided laboratory work as we understand it today. In 1840 there were no medical schools in Illinois and the pioneer physician received most of his education in the offices of preceptors.

Dr. George Weaver[1] states that one of the things these preceptors could do to good advantage was to instruct their students in practical anatomy. One of the chief problems in connection with such instruction was the supplying of material for dissection. This was imported from a distance or, more often, stolen nearer home.

Many gruesome tales are told of these early teachers of anatomy and their students. The methods of securing subjects for dissection in a small community were always open to question and for years the well founded fear of "grave robbers" haunted rural communities.

During the forties the anatomical question proved the Nemesis of three of the four medical schools founded in the state in that decade, the only survivor being Rush Medical College. At Jacksonville the medical building of Illinois College was once surrounded by an angry mob seeking vengeance for the supposed exhuming of the body of Governor Duncan for anatomical purposes.

Franklin Medical College at St. Charles came to an untimely end in a riot caused by the theft of the body of a prominent young woman in Sycamore by two of its students. One of the students was killed, and Dr. Richards, the school's founder, was shot and forced to leave the city. The Rock Island Medical College, which had only one year of existence in Illinois under that name, saw some "excitement" over the anatomical question and changed its name to the College of Physicians and Surgeons of the Upper Mississippi, After another year it moved across the river to Davenport again changing its name.

These early schools had lecture rooms, a dissecting room and a chemical laboratory of a simple sort. The departments of anatomy were usually equipped with charts, and their announcements mentioned "dissected preparations for purposes of demonstration," "cabinets" of chemicals, minerals, etc. Apparently to divert public attention from the local origin of the subjects for dissection, both the medical schools at La Porte, Indiana, and at Jacksonville stated in their circulars that an ample supply of subjects was obtained from "abroad." Two features of which the schools always boasted were their microscopes and "anatomical museums."

The founding of Rush Medical College occasioned the advent to Chicago of three pioneers in the field of medicine, Doctors Daniel Brainard (1812-1866), James Van Zandt Blaney (1820-1874) and Nathan S. Davis (1817-1904), the latter having the distinction of being the first professor of Pathology in Chicago.

Dr. Brainard performed the earliest autopsy in Chicago of which Dr. Ludvig Hektoen[2] was able to find any record. It was made in 1844 on an acephalic fetus with an unusual malformation of the heart, which was illustrated by a drawing. His interest in experimental research continued, for in 1853 Brainard presented two papers to the Academy of Sciences in Paris setting forth the results of his experiments on rattle-snake venom in pigeons. As reported by Dr. Hektoen[3] "The venom caused spasm of muscles, especially those of respiration; it deprived the blood of fibrin and changed the form of red corpuscles; solution of iodine and of iodide of potassium had some antidotal effects."

Chicago's pioneer chemist was Dr. James Blaney, who was working on chloroform at the same time Simpson discovered its use as an anesthetic. He was succeeded by two equally distinguished teachers, John H. Long and Walter S. Haines.

In 1850, John McGirr performed what was probably the first experiment in infectious disease in Chicago when he made inoculations of measles in the hope of producing protection by a mild attack.

Dr. DeLaskie Miller,[4] assisted by E. F. Ingals, performed an autopsy on the body of a boy, 20 months old, who died with symptoms of peritonitis in a case of impaction of the vermiform appendix, in 1862.

During these same years Dr. Blaney stressed the value of autopsies and continually urged his

students to be present at post-mortem examinations.

Among the hospitals it was Cook County which really introduced Pathology to the Middle West in 1878. Steps in this direction had been made as early as December, 1865, with the appointment of Dr. Henry Lyman as "curator of the dead house." Because of his youth and recent introduction to Chicago he applied for this lowly post and obtained it on the grounds that as an intern in Bellevue Hospital and in the U. S. Army hospitals he "had probably made more autopsies than any other physician in Chicago."[5]

However, at this time there was no microscopic and no clinical laboratory in the hospital, asepsis was unknown, and physicians and surgeons insisted on doing their own dissecting. This situation prevailed until Dr. Hosmer Johnson became pathologist in 1870. Then he insisted on having first claim to material in the dead house for teaching purposes.

In 1877, Isaac N. Danforth, the one pathologist worthy of mention before Christian Fenger, came to Cook County Hospital. He had been made pathologist to St. Luke's Hospital in 1870, was lecturer on Pathology at Rush, professor of Pathology at Chicago Medical College and the Women's Medical College. He became president of the Chicago Pathological Society and first president of the Society of Medical History, besides editing the pathological transactions of the Chicago Medical Society. A number of articles of which Danforth was the author appeared in the *Chicago Medical Journal* in the seventies. Most of them were concerned with microscopy. He urged the daily use of the microscope and listed the qualifications for a really good and serviceable one.

In a letter written to Dr. Hektoen about 1897, Dr. Danforth gives a picture of the conditions of Pathology when he took the Cook County position:

"I had been Pathologist to St. Luke's Hospital for some time, but in that institution the autopsies were very few, and generally made hastily and surreptitiously, and *never* in the presence of the students. Moreover, we had no conveniences for making complete or thorough examinations, and no apparatus for pathological research. Of course all this is now changed.

"As long ago as 1878 there was no general anatomical law, no Demonstrator's Union, or any other means of obtaining, or for the equitable division of, anatomical material; hence every Professor of Anatomy and every Demonstrator became a sort of pirate who went prowling around the dead houses of the various hospitals in search of 'material.' They also had understandings with the Internes and Undertakers as to the delivery of bodies for a 'consideration.' This state of things brought me in frequent collision with anatomical teachers, who did not want the bodies 'posted' before they went to the dissecting room."

In the spring of 1878 there came to Cook County Hospital the first pathologist in the Middle West worthy of the name. Born in Denmark in 1840, he had studied medicine on the Continent in Copenhagen and Vienna, where he served in both the Prusso-Danish and the Franco-Prussian wars. In 1875 he went to Egypt to take over his brother's practice in Alexandria. Later he went to Cairo, where he made an investigation of trachoma in public school children and of a highly fatal epidemic disease of the respiratory organs in horses and mules. Ill health forced him to leave Egypt and in June, 1877, Dr. Christian Fenger accompanied an American major on sick leave to Bloomington, Illinois, eventually locating in Chicago.

Fenger secured his position at Cook County Hospital by buying it with money which a friend had loaned him. At that time $1,000 was the price to the county commissioners, no small sum for those days.

In "Christian Fenger as I Knew Him" L. L. McArthur[6] says, "To one who had sat at the feet of J. A. Allen, Moses Gunn, Hosmer A. Johnson, and Nathan S. Davis would come more sharply the consternation at the radical changes made necessary by the newer pathology, morbid anatomy, and bacterial proofs submitted by Christian Fenger, the newcomer."

During the first two years Fenger was given the inconvenient clinic hour from one to two, so attendance at his classes was slight at first, although the faithful attendants included Drs. McArthur and J. B. Murphy. At the end of that period his familiarity with surgical problems was so evident that other members of the staff left him in charge of their services during vacations. For the next fourteen years he was attending surgeon, during which time he constantly accumulated specimens of every type of surgical pathology. He it was who introduced the antiseptic methods of Lister in operations performed at Cook County Hospital, this in 1878 or 1879.

Fenger became curator of Rush Medical College in 1880, professor of surgery in the College of Physicians and Surgeons in 1884; surgeon-in-chief to Passavant, German and Norwegian

Tabitha hospitals when they were founded; in 1893 he assumed the professorship of surgery in the Chicago Medical College and became surgeon to Mercy Hospital; in 1899 he became professor of surgery at Rush with a surgical service at Presbyterian Hospital.

Before the advent of Fenger, bacteriology was an unknown science. About 1869 occasional articles had appeared on disease germs, septicemia, antiseptic surgery, but the names of Koch, Lister and Pasteur were little mentioned in Chicago medical journals before 1879. Ten years before that Dr. Edmund Andrews acknowledged that the use of carbolic acid was a remarkable addition to surgery, but he advised no one to make a hobby of it. As late as 1883 Dr. N. S. Davis declared before the Illinois State Medical Society that "germ theories" of disease and "germicide remedies" were running too rampant.

One of the first public demonstrations of pathogenic bacteria in Chicago was made by Fenger in 1879 when he gave a demonstration of the bacterial nature of acute endocarditis, the first on this side of the Atlantic. He actually exhibited under the microscope some of the exudate from the heart valves in which were myriads of micrococci.

William T. Belfield, who had recorded Fenger's demonstration, also sent letters to the *Chicago Medical Journal and Examiner* from Vienna in 1882, recounting Koch's discovery of the tubercle bacillus. Upon his return he demonstrated it in Cook County Hospital and to the Chicago Pathological Society, emphasizing the clinical value of examining the sputum for tubercle bacilli. In 1883, Henry Gradle, another young Chicago physician who had worked with Koch abroad, published one of the earliest books in English on the "germ theory of disease."

During the following years Bayard Holmes played a significant part in bacteriology in Chicago. He was largely self-taught; as an intern he set up a bacteriologic laboratory in his bathroom, where he made cultures on gelatin, boiled eggs and coagulated hydrocele fluid of wounds and suture materials. For this he suffered much ridicule on the part of his fellows. His first article was written in conjunction with Christian Fenger and dealt with bacteriologic control of antiseptic methods. In 1888 he published a notable article on secondary mixed infection in typhoid fever.

In the same year diphtheria was recognized as a contagious disease, and the foundations laid for quarantine of patients.

Dr. Theodore A. Edwin Klebs, one of the first to see and describe the diphtheria and typhoid bacilli, was professor of Pathology in Rush Medical College from 1896 to 1900. Preceding that he had served as assistant to Dr. Rudolph Virchow for five year, was professor of General Pathology at the University of Bern for six years, held the chair of his former teacher, Virchow, at the University of Wurzburg, and was then at the University of Prague and the University of Zurich, serving as a teacher of Pathology for twenty-five years.

In 1889, Dr. Nicholas Senn[7] published a review of the current literature on surgical bacteriology, thus bringing us up to the modern era in this branch of medicine. After 1890 new laboratories were organized in the medical schools; laboratory teaching was developed, and laboratory methods were introduced in clinical diagnosis; bacteriology was added to the curriculum and its methods introduced into public health work. Soon bacteriological research was under way.

Interest in the new movements in pathology was fostered by the formation of the West Chicago Medical Society in May, 1878, under the presidency of Norman Bridge. Dr. Lyman read the first paper, his subject being "Fermentation," before an audience of thirty-three. In 1881 the organization changed its name to the Chicago Pathological Society.

Regular monthly meetings were held at Dr. Lyman's home, with an average attendance of 12 to 20 of the 50 or 60 members. These were essentially clinical in character, though the number of pathological and microscopic specimens demonstrated was rather insignificant. Such subjects were discussed as "Tetanus in a Newly-Born Infant," "Two Cases of Myxedema," "The Influence of Mind Over Matter," and "Atmospheric Dust as the Cause of Disease." In the reports of the meetings of this society we find the first records of the scientific work of Christian Fenger. Dr. Edward Holmes reported a case of general miliary tuberculosis with involvement of the choroid, which Dr. Fenger had examined post-mortem.

Gradually meetings were marked by increased interest in purely pathologic subjects, and the membership was strengthened by a number of persons interested in pathology and bacteriology. In the nineties this caused the affiliation with the Chicago Medical Society and the transfer of meeting place to the Loop. From 1894 to 1936 the Society published regular numbers of its Transactions. Since 1936 the Transactions have been printed in the *Archives of Pathology*.

Two other societies of a fleeting character were the Chicago Biological Society, founded in 1882, and the Pathological Section of the Chicago Academy of Sciences, started in 1891. Both passed out of existence after a few sessions.

Under the stimulus of increased interest in medical education, Pathology took on a wider horizon. We may mention but a few of the leaders in the early part of this century.

At Northwestern University Medical School, Dr. Frederick Robert Zeit prepared one of the outstanding museums of pathology in this country. It has been properly and officially dedicated in his honor. He is well known to all Northwestern graduates through his famous course on tumors.

Dr. Maximilian Joseph Herzog did much research work in pathology, both in Chicago and for a few years in Manila and Japan. He was professor and dean of the Department of Pathology in Loyola University.

The dean of all pathologists in Illinois and the Middle West is Dr. Ludvig Hektoen. Professor of Pathology at the College of Physicians and Surgeons for two years and director of the department at Rush Medical College for over 30 years, he still continues active. In his early years in pathology, he worked with Nicholas Senn and Christian Fenger, bringing to fruition their beginning endeavors. His activity is still manifest, since he is editor of the *Archives of Pathology* and of the *Journal of Infectious Diseases*, Executive Director of the National Advisory Cancer Council under the National Institute of Health, and a director of the American Society for the Control of Cancer. In conferring the degree of Doctor of Laws *honoris causa* upon Dr. Hektoen, Western Reserve University cited him as "pioneer pathologist of the Middle Border."

Among Dr. Hektoen's students are Dr. H. G. Wells, head of the Department of Pathology at the University of Chicago, Dr. D. J. Davis, Dean and Head of the Department at the University of Illinois College of Medicine, Dr. James P. Simonds, Director of the Department of Pathology at Northwestern Medical School, the late Dr. Howard T. Richetts, who is so well known for his work on blastomycosis and Rocky Mountain Spotted Fever, and the late Dr. E. R. LeCount, that authority in practical pathology, both clinical and medicolegal.

The history of the medical work of the Cook County Coroner's Office is intimately associated with both Dr. Hektoen, the first Coroner's Physician, and Dr. LeCount, who for many years was chief of the Coroner's Staff of physicians. However, the first Coroner who was a physician, Dr. Ernest Schmidt, connects that office with the "father of pathology," since he had his training under Dr. Rudolph Virchow.

Among those who have given particular attention to the legal side of this branch of medicine is Dr. Oscar Schultz, whose exhibits at the recent World's Fair on the medical examiner's office have given much cause for thought.

In one hundred years Pathology has developed from a nonexistent course in medical schools to one, if not the chief, of the fundamental courses. Many men are devoting their full time to this subject in the medical schools, but a more significant sign of its importance is that the hospitals are installing pathology departments, which in some of our larger Chicago institutions compare favorably in teaching and research with those in medical colleges. All Chicago physicians are familiar with the courses of the late Dr. Richard Jaffe at the Cook County Hospital. He made the results of the autopsy an "indispensable adjunct" in the effective teaching of medicine.

In order to have more autopsies there must be a sympathetic understanding between the physician and the mortician. This is being accomplished in Chicago through joint meetings of both groups, the first of which last month brought out several hundred to witness films on the proper technique in the performance of an autopsy and the embalming of the body.

The Illinois Society of Pathologists was organized this year and, while it may be coincidental, it was found that there are approximately one hundred qualified pathologists in this state who meet the training requirements of the

American Board of Pathology. One hundred years to produce one hundred pathologists, who are serving the public in private laboratories, coroner's office, hospitals, cancer institutes, research institutions and medical colleges.

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A CENTURY'S DEVELOPMENT OF PUBLIC WELFARE WORK AND PROJECTS (1840—1940)

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The largest governmental department of the State of Illinois, the Department of Public Welfare, organized in 1917, indicates the interest of the people in mental and physical health. Prior to the founding of the first state hospital at Jacksonville in 1847, there was no material evidence of general community interest in the mental health of Illinois residents. When they became insane they were kept at home, often in basements or outbuildings, or lodged in county jails.

Early in this period of awakening civic health-consciousness an outstanding medical unit was founded in Chicago for the treatment of indigent eye and ear patients. The Illinois Eye and Ear Infirmary, of which the state assumed charge in 1870, has probably treated more individual patients than any other institution of its kind in the United States. The vast majority of these are dispensary cases—101,808 visits in 1939, during which period 5,505 patients were hospitalized. This hospital is also an active teaching institution, training 24 residents every two years.

The development of state asylums, as they were called, proceeded steadily but irregularly, and their popuation grew correspondingy from one person at Jacksonville to the present day, population of over 30,000 and from one small institution to the present nine, each located in its district of a number of counties. In and about Chicago there are now four large state hospitals caring for approximately 12,000 residents of Cook County, in addition to many patients from nearby counties.

Institutional care and treatment for the feeble-minded was first furnished at the Institution for Idiots and Imbeciles, established at Jacksonville in 1866 and removed to Lincoln in 1877. The Dixon State Hospital was established in 1913 and together these "schools and colonies" care for 8,270 patients. The treatment of the feeble-minded is essentially a medical problem that need not be discussed here in view of the fact that it has principally to do with recreational and vocational education, with some academic work for high-grade morons. Very regrettable from the viewpoint of treatment is the fact that these fine institutions are mostly utilized by the public for the commitment of idiots, imbeciles and delinquent morons. There are thousands of children in this state with an intelligence rating of 50 to 70 per cent. who should be trained in these good schools to do the socially useful tasks which they are capable of learning, after which they should be returned to their homes to make their contribution to the community with a self-respect not possible without such training.

All institutions operated separately under local boards of medical and financial management until, in 1909, a central State Board of Administration was set up by legislative enactment to coordinate policies and purchases. The medical member of this board was designated as the state alienist, a position held successively by Doctors James A. Greene, Frank P. Norbury and George Zeller, all now dead. The board of administration, though it existed only eight years as such, achieved several outstanding medical tasks.

Thus mechanical restraint was abolished in its cruder manifestations, such as locking patients in their rooms at night and using barbarous leather contraptions. There is no doubt that this achievement has contributed largely through the years to the health and happiness of state hospital patients. Today restraint is used only in medical and surgical

cases when absolutely necessary, in the form of wrist or ankle bandages.

Probably the most humane act of this body was to secure the passage of legislation in 1912 to remove all mental cases from almshouse care, thus doing away with old Dunning of unsavory memory and rebuilding much of the institution under its present name of the Chicago State Hospital.

The Psychopathic Institute, established on a modest scale at Kankakee about the same time, opened the way to research into the cause and treatment of mental disorders and was the forerunner of the neuropsychiatric unit of the Research and Educational Hospitals in Chicago, to be occupied this year. The passage of a state civil service bill in 1905 gave some assurance that qualified employees might continue politically unmolested in their work.

In 1917 the present Department of Public Welfare was organized, retaining the state alienist and adding a state criminologist. Soon the Juvenile Psychopathic Institute of Chicago —founded in 1909 by Dr. Healy and Mrs. Dummer as a private charity—was taken over as a state project, under the direction of Dr. Herman Adler as state criminologist and was renamed in 1920 the Illinois Institute for Juvenile Research, its major service becoming that of a community clinic, serving children referred by the Juvenile Court, social agencies, schools and relatives. The Psychopathic Institute at the same time was placed under the direction of the alienist, Dr. H. Douglas Singer. During succeeding years the department has developed an extensive health program, involving many physical structures of considerable magnitude principally concerned with mental health and with the erection of a medical center in Chicago.

Soon after the organization of the welfare department it became evident to the director, Mr. Charles T. Thorne, and to Dr. David Kinley, president of the state university, that the university medical school must have a hospital of its own. Rapidly plans developed for the Research and Educational Hospital in Chicago, now for many years an accomplished fact, and near neighbor to Cook County Hospital. The building and maintenance of this hospital group has been carried on under state management, while the teaching and medical staff is controlled by the university authorities, under an agreement which appears to have operated satisfactorily to the present time. The general hospital contains 402 beds and cribs and in 1939 gave bed care to 5,614 cases. The dispensary upon the ground floor, almost an institution in itself, registered 13,011 new patients last year, and recorded a total of 174,969 visits.

The most notable of the additions to this great institution is the Neuropsychiatric Institute, sponsored by Director A. L. Bowen, and now practically completed, with a capacity of 100 beds for psychiatric and 50 for neurological cases, in addition to suitable research laboratories and amphitheatres for teaching purposes. These facilities will be available to all medical schools of Chicago. Since mental patients occupy more beds in the State of Illinois than all other patients combined, it is evident that every effort must be made to search for causes as well as treatments for mental diseases, in order to lessen in time the number of people in state hospitals.

In 1933, legislative enactment reclassified all prisoners in Illinois and provided for a preliminary physical, social and mental diagnosis for each newly convicted person, thus placing Illinois in the forefront of scientific penal management in the opinion of courts, penologists, and criminologists who recognize the need of applying mental medicine to criminology.

Diagnostic depots were established at Joliet and Menard where, in the first twenty-one days of a prisoner's term of imprisonment, he is carefully studied by a corps of competent examiners under the direction of the state criminologist. This classification board, composed of a psychiatrist, a psychologist, an assistant physician and a psychiatric social worker or sociologist, then recommends the proper placement of the prisoner in the penitentiary system, his group placement and the plan of treatment to be instituted. This medical approach to the problem of prisoner treatment gives promise of good results in the rehabilitation of improvable criminals.

It is perhaps not generally known that the Welfare department carries on two sets of medical clinics of major importance. On July 1, 1937 the Division for Handicapped Children was established, and with state and federal

funds has to date held 168 clinics in various places, principally downstate. Recent surveys have revealed that there are approximately 32,000 crippled children in Illinois. This division aims at welfare work in general as well as treatment for the afflicted. Those who can afford private treatment are excluded. At the Illinois Research and Educational Hospitals alone 51,000 hospital-days were furnished during treatment and convalescence. Artificial respirators (iron lungs) were installed in 1938 in seven state hospitals for the treatment of infantile paralysis in the surrounding communities.

The Governor Horner Trachoma Clinics completed their fifth year on June 16, 1939, and report that this serious disease, prevalent for years in southern Illinois, has begun to show signs of diminishing. Free bus service, provided by the department, has carried patients from 114 towns and villages to and from 5 clinical centers. Over 3,500 cases have been treated.

Many years ago Illinois officially recognized its medical as well as socio-economic responsibility, in connection with mental disease, by designating its institutions for mental patients as state hospitals; but this change of name did not change their character overnight. The climb upward toward actual hospital status has been a long and arduous one and is not complete. It can be fairly said, however, that everything possible has been done for many years, and especially in the last ten, to equip and man our state hospitals for the work they have to do, in so far as available funds permit. Without complaint, it may be remarked that the average per capita cost of Illinois state hospitals is less than 70 cents a day, while many eastern institutions spend over a dollar a day. Illinois, however, pays as it goes, has not issued bonds for the support of its patients, nor to carry on the immense building program of recent years. A hospital for mental patients is not simply erected in a given year, but is remodeled and added to indefinitely. Thus since 1933, in order to provide decent housing conditions and to improve diagnostic and treatment facilities, $14,442,000 has been spent and more than one hundred new buildings have been erected at the nine state hospitals; including nine structures for the special care of tuberculous patients, and six fine diagnostic centers for the reception of new admissions. The inventory of buildings, land and equipment for our mental hospitals alone represents $36,845,000—a far cry from those days less than a hundred years ago when Dorothea Dix traveled 30,000 miles through the East and Middle West to champion the rights of the insane to medical care and treatment.

Institutional mental medicine in Illinois represents at present the care and medical management not merely of 30,000 patients a year —the average population in 1939—but of many thousands more that are seldom taken into consideration. Thus, at the Elgin State Hospital in 1939, the average population was 4,660, but owing to 2,007 admissions during the year, 6,667 patients received care and treatment. Not all patients are committed by court action. Many come of their own accord. At the above mentioned hospital 25 per cent of the admissions last year were voluntary. In the increase of the hospital population and of voluntary admissions, there is evidence of increasing public confidence in state hospital treatment.

A Superintendent of the Division of Mental Hospitals has recently been appointed to assist in the supervision and coordination of the medical work of the various state hospitals, and a Supervisor of In-training Service has been appointed to oversee the important work of training the attendants and nurses who are already in the state service. Clinical directors and pathologists are being appointed as rapidly as suitable men can be found, and the percentage of autopsies is constantly increasing.

In a hospital with an active receiving service, approximately one-fourth of the entire population is under some form of active treatment for physical or mental illness, while the remainder—the ambulatory infirm of all descriptions and psychotic patients for whom there is slight hope of recovery—require not merely custodial care, but continued and emergency treatment, and constant psychiatric observation. It is, perhaps, not generally understood that a multitude of mental patients who never actually recover may for considerable periods of time improve sufficiently to make a good hospital adjustment, or even to return to their homes.

Such partial remissions occur notably in cases of paresis, cerebral arteriosclerosis, feeble-mindedness with psychosis, and in a large number of schizophrenics.

It is regrettable that the laity, as well as the medical profession in general, can have no adequate idea of what the daily medical program of an active state hospital actually represents. Such a program includes anticipated and emergency operations, diagnostic physical work-ups, psychiatric examinations, sundry laboratory tests, x-ray examinations, psychological determinations of intelligence and of the improvement of patients, the work of the dental office and dispensary clinics, staff conferences for the consideration of diagnosis and treatment and of questions of parole, the daily administration of insulin and metrazol shock therapy, the carrying on of employee-educational work and occupational, hydrotherapy and recreational treatment programs, etc. And back of all these activities looms the constant making of records of the behavior of patients, their physical status, the treatment of their physical and mental illnesses, etc.

With all this to be done, and more that can only be read between the lines, it redounds to the credit of many a physician in the state hospital service that he is still eager to carry on investigative work in part on his own time and, when possible, to seek junior faculty positions in medical schools. The staff physician of a progressive state hospital nowadays, far from being a follower of routine, is an active professional man.

A CENTENNIAL SUMMARY OF MEDICINE

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The Illinois State Medical Society was formally organized in 1840. The State itself had been admitted to the Union 22 years before, but in this year of Grace had only 476,183 inhabitants of which 4,470 were in the City of Chicago.

The population was composed of a heterogeneous group of Indians, hunters, half-breeds, trappers, Frenchmen and slave catchers as well as adventurers from the east who flowed in continually to secure homesteads and cheap land or to embark in various business enterprises. Among the latter "land fever" was the most prevalent disorder and the frenetic state was so acute that every speculation was regarded as worthless which did not double in value over night.

The prairies stretching out south and west from Chicago were low and swampy and, though relatively dry in summer, yet were often flooded by rain for months at a time. When this happened rivers overflowed, the creeks were swollen to rivers, no bridges existed, and all water courses had to be forded at the risk of life, or at least of long detention in the firm grip of the alluvial mire at the bottom.

Even at the most favorable seasons however the prairies were spotted with innumerable ponds, quagmires and mudholes which made travel so slow, difficult and uncomfortable that it took from two to three days to go from Chicago to Peoria. On the other hand those vast spongy meadows were carpeted with myriads of wild flowers and throughout the congenial months teemed with quail, prairie chickens and deer with an occasional buffalo for good measure.

The rivers and lakes swarmed with fish while thousands of wild ducks, geese and swans floated in ease and comparative safety on the beautiful surfaces which glinted in the sun like a myriad of small mirrors.

Dr. J. Murphy of Peoria (1848) however, testified that these same boggy meadows, abounding with flowers and game were also saturated with malaria. At all events physical disorders of various kinds were rampant. Throughout the year cases of typhus, typhoid, scarlet and yellow fevers, measles, malaria, cholera, erysipelas, smallpox, cholera infantum, pneumonia and cerebrospinal meningitis were always somewhere present while epidemics of one or more of them often swept over the State, leaving a devastating mortality (30%+) to mark the passage of the pest.

Vaccination, of course, would have prevented the smallpox if the people had not been unconvinced and fearful—but in no instance were any sanitary measures observed. The doctors travelled on horseback with saddle-bags, or by gig or buggy, carrying a limited supply of fever medicine, sulphur and molasses, obstetric forceps and a case of instruments for emergencies. The bag might also by chance include a monaural stethoscope.

In that age of trail breaking and frontier life, trained physicians were scarce. There was no medical practice act, and anyone who felt the urge or ambition to treat the sick became at once a doctor with full powers to act. In consequence, the country was infested with cultists, quacks, charlatans, empirics, herb doctors and unskilled dogmatists who had salesmanship rather than wisdom and often knew less than the helpless people who received their officious attentions. There was no God in Israel.

Old theories, new illusions, hunches, and imperfectly interpreted observations laid heavily upon medical practice everywhere. During epidemics the doctors were overworked and often slept in their saddles where they passed day after day in making the fifty or sixty calls per diem in localities which were usually far apart.

Slowly the conditions improved. The formation of the State Society was resented at first by jealous outsiders who regarded it as a clique. Other medical organizations appeared. Rush Medical College was chartered 1837, opened 1843. The first city medical society was assembled in Peoria, and the American Medical Association, the same year. In 1850 the Chicago Medical Society was established, and in 1859, the Chicago Medical College, which was the first school in the United States to require a graded curriculum, while at long last (1877), a medical practice act was secured by members of the State Society. This again was more comprehensively cared for by the Act of 1923, also obtained through persistent efforts of the Society.

Such were the conditions in Illinois which prepared the soil for seed-time and harvest of the marvelous advance in general and medical science which was about to envelop mankind during the century just closed.

Since long before the Christian era, anatomy had been patiently examined by doctors, medically minded philosophers, painters, priests, adventurers, and curiosity seekers throughout the world, and the main divisions of the human body with its congeries of organs were fairly well understood and charted. Physiology, pathology, and chemistry were sturdy infants of recent birth scientifically but growing slowly toward an active adolescence. The art of medicine was blindly feeling its way out of an Egyptian darkness of ignorance and superstition. Lights appeared here and there, yes, but it was difficult to learn whether they were the lights of truth or the will-o-the-wisps of error.

The scientific practice of medicine really beban with Magendie (1787-1855) who was a pioneer in the experimental approach. Louis (1787-1872), and Johannes Müller (1801-1858) followed closely. Müller was one of the greatest leaders in the upgrowth of physiology, and probably the actual founder of what was ultimately scientific medicine. Together with these was Claude Bernard (1831-37), Magendie's assistant, who must be considered with Laennec, and the group culminates in Virchow (1821-1902), the sun of this galaxy who still throws his fervent beams upon the present age.

It was Louis who took a strong stand in favor of facts and figures as against the sterile theorizing of the past and made his mark in tuberculosis and in typhoid which he named. He was the first to use a watch in timing the pulse. The statistical habit which he developed was of great value in aiding Erb and Fournier to test the value of hydrotherapy in typhoid and later, the antitoxin in diphtheria, operative intervention in appendicitis, and in experimentation with new drugs such as the 606 of Ehrlich. His pupils in America, Holmes, Gerhard, the Shattucks, Jacksons and others followed his method and spread his reputation.

Laennec invented the stethoscope (1819) which was at first only a cylinder of paper, then a wooden affair and later converted into the binaural instrument of today by Osler (1885). Laennec's treatise on percussion, (Auenbrugger 1702-1809) and auscultation (1826) gave him place among the greatest clinicians of all ages, and the book still remains the foundation stone of modern knowledge of chest diseases and their diagnosis. He was also known as a most successful teacher on tuberculosis and as the forefather of clinical medicine.

Claude Bernard began his work with a study of the gastric juice (1843) but devoted himself largely to the functions of the nervous system to which Bell, Magendie, Hall and Müller had so actively contributed. On the possibility that the vagus might influence the hepatic secretion, he punctured the floor of the fourth ventricle and produced an artificial diabetes, or experimental glycosuria, in 1849, and for this work he is regarded as another of the pioneers in experimental medicine.

This sound basis needed only a potent impetus to enable medicine to break out into a salutary freedom of thought. Fortunately such a stimulus was already in course of gestation, and in 1842 all minds were tensed by Darwin's preliminary statement on "Natural Selection" which was more abundantly fortified by the "Origin of the Species" (1859).

"Darwinism" set the intellectual cosmos afire. The smug complacency of mid-Victorian Europe was stirred out of its slumbers, the striving Jacksonian democracy of America which was only concerned about personal health when epidemics appeared, was compelled also to wonder what new thought was disturbing the political atmosphere. Religionists of all sects were foaming with rage and animosity against the implied criticism of a Divine creation while scientists became deeply thoughtful over the profound significance of the theory, if it could be demonstrated.

Every civilized country was affected. The Darwinian postulate not only compelled a vigorous mental activity but provoked acrimonious discussions which demanded study and revisional examinations of all the basic principles of accepted scholarship. The world of mind was supremely aroused, the hierarchy of medicine could not remain static, and the romantic story of its scientific development was inaugurated.

The epoch of anatomy had been of long duration and the existing knowledge of the human body was grossly satisfactory. Surgery also to a limited degree was imperative but the mortality was frightful to recall now. Operative intervention was practically restricted of necessity to the limbs and surfaces of the body while the surgeons themselves were distinguished according to the speed and dexterity of their procedures. It is related that Cheselden did a lithotomy in less than a minute, that Fergusson, the founder of conservative surgery, was so speedy that spectators feared to glance aside lest they miss the whole operation, and Pirogoff challenged comparison with a sleight-of-hand artist, so rapid was he in the use of the knife. The obligation for haste was unavoidable since the patient could not undergo a prolonged maneuver lest he die of shock.

Relief however from this unfortunate state of affairs was now impending. Nitrous oxide, discovered by Sir Humphry Davy (1799) was presented to the profession as an anesthetic (Wells 1849) but met with a long delay. Ether had been used for the same purpose by Long (1842), and demonstrated by Morton (1846). Chloroform was brought out by Simpson (1847), and Luckhardt's ethelene (1923). Several others appeared later like avertine, vinethene, cyclopropane etc. The discovery of cocaine (Anrep 1879-84) and its derivatives extended the technic to circumscribed localities, and to the superficies of the body. Anesthesia, named by Holmes in 1846, gained rapid approval and safety with usage, and that feature of Heaven predicted by the Evangelist in the words, "neither shall there be any more pain," was assured. When an anesthetic was first employed for a major operation in England, Robert Liston, the surgeon, working with his usual dexterity, did a thigh amputation in twenty-five seconds.

The battle however had but just begun. Though an operation could be carried through without pain the mortality was still alarming. The appearance of a moist gray slough surrounded by an angry blush portended the onset of hospital gangrene which few, if any, of our modern surgeons have ever seen. In the Crimean war 10,006 out of 13,172 amputations were fatal from infection of some kind.

Simpson found the conditions so bad that he made a survey and learned that out of 2,089 amputations in the hospitals, 855 had ended fatally. In every instance the larger the hospital, the higher the mortality. Most surgeons were content with losing from a third to a half of their cases, a result which occurred frequently either from the incidence of secondary hemorrhage, tetanus, erysipelas, pyemia, septicemia, or of gangrene, one or more of which were never absent from the wards, and often epidemic.

Anesthesia was doing its share but the histologists and pathologists were not idle in their own sphere. Schwann (1837) was formulating his "cell theory," and meanwhile reporting the discovery of the axis-cylinder of nerves, the organic nature of yeast, the nucleated cells of the notochord and, with Schleiden, the nuclei of plant cells.

In 1839, he states, "there exists one general principle for the formation of all organic products and this principle is the development of cells, all of which may be comprised under the term "cell theory." Cohn reinforced this work

through the discovery of the similarity and identity between plant and animal protoplasm.

Virchow (1847) established his *Archives of Pathological Anatomy and Physiology for Clinical Medicine* upon the cell theory. Cellular pathology in his opinion was the recognition of the fact that the cell is the ultimate element in which there is any manifestation of life. He declared that every morbid structure consists of cells derived as progeny from pre-existing cells, just as animals spring from animals and plants from plants.

He established the law that in the whole series of living things, whether plant or animal, or essential constituent thereof, *continuous* development prevails. Thus he affirmed the truth of Darwinism which he would not openly accept. "There are," he said, "no specific cells of disease but only modifications of physiologic types."

Particular difficulty had arisen at that time in deciding which parts of the body are sources of action—which active, which passive. The chief point in this application of histology to pathology is to recognize the cell as the ultimate morphologic element in which life is manifested and "we cannot, must not, transfer the seat of real action to any point beyond the cell." He taught that medicine as an allied science must rest upon the firm foundation of the natural sciences.

His work is too vast even to be summarized here. He was the central figure in the Berlin faculty and, until the day of his death (1902) the potent ferment of his brain autocratically ruled the domain of medicine to its signal advantage.

The pathology of Morgagni (1682-1781) was the pathology of organs, that of Bichat (1771-1802), the pathology of tissues, but Virchow focussed the attention on the elements that form the tissues. Morgagni thought in terms of anatomy, Bichat in terms of physiology, Laennec, and later Osler, as clinicians, while Virchow introduced pathologic thinking into medicine and his dictum, "omnis cellula e cellula," is still steadfastly true.

The bacteriologists were also striving diligently for light. The spontaneous generation of germs had been generally accepted by the faculty of medicine until it was overthrown by the experiments of Pasteur. This genius first came into notice when, through his masterly analysis of the conversion of racemic acid into dextro-tartaric and laevo-tartaric acids, he laid the foundation for stereo-chemistry in 1848. He discovered (1856-62) that fermentation and changes in the nature of wines and beers, were due, like the diseases of his silk worms, to micro-organisms.

These studies in connection with the bacteriologic work of others, prepared the way for his research on anthrax. Comprehension of the origin and transmission of plagues, fevers and pestilences was veiled in a pall of ignorance. Fevers were catching, epidemics spread by contact, and other diseases ordained by God but now Pasteur lifts the shroud.

The bacillus anthracis had been identified by Delafond (1838) but Pasteur demonstrated that this germ was the etiologic factor in the disease. This was only the beginning. He discovered the bacillus of malignant edema in 1877 as well as the pneumococcus and staphylococcus. In 1880 he isolated the streptococcus pyogenes.

Pasteur next investigated chicken cholera (1880) which Toussaint had proven was due to infection by the bacillus avi-septicus. In this study he injected chickens with weakened doses of a culture medium—a broth of chicken gristle —and found that such chickens either did not take the disease or took it only mildly.

Edward Jenner's production of artificial immunity in smallpox had been regarded up to this time as an isolated phenomenon which was not understood although the principle had been duly set forth in Jenner's thesis. Was not this discovery of Pasteur worthy of a place beside the vaccination of Jenner which he, Pasteur, had long been pondering?

He followed this feat with the preventive treatment of anthrax by a vaccine (1882) and by yet another epochal success soon thereafter in revealing the cause, prevention, and cure of rabies, his star rose high in the Heaven of science. Jenner and Pasteur therefore must be looked upon as the founders of preventive medicine.

It remained now for Joseph Lister to make practical application of these bacteriologic advances while acknowledging his obligations to Pasteur. In the forefront of this contest he strove bravely. He was received with incredulity and derision though he showed clearly that his thesis was correct. He proved that infected wounds in surgery were due to germs, that elimi-

nation of these organisms would result in a normal healing process and used a preparation of carbolic acid in his operations. From the day of Lister's entry as professor of surgery in King's College, London, "no rise of temperature occurred after his incision was made, nor ever a blush upon a wound." Again the demonstration was complete. The new technic was then accepted as true, and aseptic surgery spread over the world like a prairie fire. Two serious handicaps had been removed. Neither pain nor speedy operations were any longer necessary but accurate diagnosis, cool judgment, technical training, and a surgical conscience were still most essential.

Hitherto the cavities of the human anatomy had been free from invasion and justly so, but from this time on the body was opened tentatively in selected cases, tissues, glands or other organs repaired, removed in part or otherwise, and the wound closed with safety and recovery. The operators however worked with great caution.

Extirpation of adenoids (1868) was followed by nephrectomy (Simon 1869) vaginal ovariotomy (Thomas 1870), renal calculus (Ingals 1873) laceration of cervix (Emmet 1874) cesarean section (Porro 1876), extirpation of cancerous uterus (Freund 1878), nephropexy (Hahn 1881) Sänger cesarean section (1882), gastroenterostomy (W o e l f e r 1884), hysterorrhaphy (Kelly 1887), and so on until every section of the body had been advantageously entered and corrected.

This broad outlet had developed from the splendid achievements of zealous investigators and, Morton, Koch, Pasteur and Lister were the men at the forefront of the experimental campaign. Pasteur especially had revealed indeed many secrets of life, and modern medicine and surgery must reverently bow the head in honor of these great men who were responsible for the marvelous feats which are exhibited daily by the profession in 1940. However in signalizing these men it must not be forgotten that they built upon foundations laid by hundreds of obscure but enthusiastic laborers in the field of science who have left but few, or no signs whatsoever of their toil. Thus as "the iniquity of oblivion blindly scattereth her poppy," so it was with the m u l t i t u d e who contributed their moieties to the paeans of the century.

Meanwhile the lying-in woman had been forever a step child to the medical profession. Though White (1772) had warned the faculty of the contagiousness of puerperal fever, it remained for O. W. Holmes (1842-3) to call forcible attention to these pathogenic emergencies together with a description of the ease and method by which the infection was conveyed. He fortified his thesis by clinical reports on which he based his accusation, and the admonitions, which he gave at the same time for the avoidance of the disaster are thoroughly sound and would have prevented many fatalities, if they had been accepted. He summarized his opinion in the stark statement that "puerperal fever is a private pestilence."

Holmes was virulently opposed by Hodge and Meigs, the best known obstetricians of the day. The latter declared that "he preferred to believe that the fever was an act of God which he could understand rather than the work of micro-organisms of which he could form no conception." The attack was so bitter and venomous that the cause was temporarily lost.

Semmelweiss (1818-1865) observed that the doctors in the Viennese hospital had a mortality from fever of 12% while the midwives had 3% only. Inquiry convinced him that the difference in mortality arose from the fact that the doctors and students went directly from the postmortems to labor cases without cleansing their hands. He therefore inaugurated the system of hand washing and nail cleaning, with the subsequent use of chlorine and a solution of chloride of lime. From that date (1848) the mortality from puerperal fever dropped to 1.27%.

Notwithstanding this plain demonstration, the profession was unwilling to accept the light of truth or change its methods. As with Lister, the men merely railed at the new idea and reviled Semmelweiss as a fanatic. They could not escape from their restrictive prepossessions. Semmelweiss was a good man struggling against adversity and the end was unhappy. He did not succeed in his appeal nor in convincing his opponents, and brooding over his failure brought on an insanity which ended in death. The device of our profession had again been realized, "aliis serviens ipse consumor."

Since 1880, however, medical men have universally accepted the fact that puerperal fever is a wound infection, definitely due to one, or

more, of the dozens of strains of bacteria which have been brought into contact with the bruised and lacerated genitalia from without. With conversion to this belief and the rigorous application of asepsis in confinement cases the better class of hospitals have no unexplainable elevations of post partum temperatures and no puerperal fever arising de novo.

Happily, the goddess Fortuna still smiled upon the expansion of medicine, and a new and priceless gift was dropped into the lap of the profession (1895) by Roentgen's discovery of the x-ray. The ray was accepted popularly but looked upon with surprise and disbelief by our skeptical brethren. How could one see through or around an opaque body which baffled the eye? Pictures in profusion were displayed by the public press and in medical journals which demonstrated the remarkable character of the new ray. Flesh was transparent but the bones were shadows. Roentgen's official report was presented and the clamor ceased.

The fluoroscope was improved by Edison and became extremely valuable in the examination of moving objects. The necessity for using glass plates made the ray somewhat slower in gaining appropriate recognition, but with the change to celluloid films acceptance was quickly obtained. At first, too, the operator of the instrument was exposed to serious injury, or even danger to life, from ignorance of the unknown powers which the ray possessed. After the earlier experimental stages, however, these dangers were eliminated.

In spite of mistakes and errors the work progressed. Where only bones and foreign bodies had been revealed, the place which the new science was destined to assume in medicine and surgery began to appear. The usage grew daily and the marvelous powers of the ray confirmed or destroyed diagnoses already made and disclosed others which were uncertain or impossible without its aid.

The various systems and organs of the body were now routinely and conscientiously explored by the ray and normal conditions revealed and abnormalities exposed. The laboratory became the ever-present help to the surgeon and extremely useful in other specialties as a valuable therapeutic aid. In the local development of Roentgenography, Pusey and Senn exercised a continous and enthusiastic influence.

The realization of the great importance of the new ray stimulated other investigations on light which resulted in the discovery of the Finson light (1895), the mercury vapor lamp (Arons, 1896), of radium by the Curies (1898), the quartz lamp (Hewitt, 1901), ultra violet light (1903) and others.

Throughout this period the interest in collateral medical affairs constantly kept pace with the increasing enthusiasm of the profession. Colleges of medicine arose all over the country, but many of them were substandard and fell by the wayside when the American Medical Association and the American College of Surgeons insisted on changes which would give them higher ratings. However, many schools did also provide for the entrance of women on the same terms as men.

Hospitals were enlarged and new ones erected. Local, state and national societies had increased attendance and heightened interests which were both instructive and stimulating. Specialties were fostered in the various fields, group medicine sprang up, the Red Cross movement began (1864), and the training of women for a nursing career became general. Faraday and Maxwell worked out the whole theory of electricity and electro-magnetism (1859), Bunsen's spectrum analysis (1859), and Mendel's law reported (1865), lost and recovered (1900). In 1893 Freud presented his theories on psychoanalysis, and psychiatry was born as an efficient aid to neurology. A world-wide campaign against cancer began about 1930.

Laboratories became increasingly necessary and courses in higher chemistry, pathology, were added to curriculums, and x-ray laboratories placed in hospitals and developed elsewhere for commercial reasons and general assistance to medical men. Bacteriology, founded by Pasteur and Koch, had rapidly become a thoroughly organized technology of immense practical value, and two of its phases, personal and environmental bacteriology, are naturally of extreme significance in sanitation. In these numerous innovations one beholds the mystery of medicine definitely transmuted into the magic certitude of science.

From this all too brief account of the rise of modern surgery and its elaborate sequelae our attention must turn to a review of the changes which occurred in the kindred branch of internal

medicine as a consequence of that same Darwinian upheaval. The zealous outburst of energy, thought and experimentation had naturally extended to every department of medical art but in the special field of non-operative work, the industry of the old masters must again be recalled. Magendie, Louis, Auenbrugger, Laennec, Muller, Bernard, and the great Virchow were strongly in evidence here and to these also must be added the name of Jenner, for, while diagnosis became a refined art under Auenbrugger, Louis and Laennec, and though scientific surgery marked the 19th century, Jenner was the unconscious apostle of preventive medicine which distinguished the latter part of the 19th century and waxed rather than waned with the dawn of the twentieth.

It must be remembered that Jenner's "Inquiry" (1798) on vaccination was in reality an inaugural thesis on immunology. The fact that vaccination was effective, that smallpox did not attack a person so treated, or occurred, if at all, in a mild form, either at home or in the armies which were formerly devastated by the pest, made strong friends for inoculation.

Pasteur's illuminating experiments with chicken cholera was the next step and the success of inoculation was assured. The hypodermic syringe had been introduced in Europe by Rynd (1845), and to America by Barker (1856). This implement greatly simplified the technic of immunization. The pocket clinical thermometer was brought out by Allbut in 1868.

During this period, in full operation were the chemical and bacteriological examinations of foods, air, soil, drugs, water and its chlorination, disposal of sewage, cremation, hygiene, of occupation and dwellings, medical inspection of school children and factories, settlement work, slum clearance, blood tests for venereal disease, regulation of marriage, studies in alcohol, widespread employment of open air treatment of tuberculosis (Trudeau, 1864), and on down to sanitary towels, drinking cups and many similar precautionary measures.

Meanwhile the stage was being set for another dramatic event of vital importance. This time in England, where Sir Wm. H. Perkins (1838-1907) was quietly working out what was later known as "Perkins' purple," or mauve. This was the first of the aniline dyes (1865), but its production revealed the whole realm of constructive chemistry and synthetic pharmacy. This discovery was a conjurer's hat out of which anything could be drawn, and chemotherapy came forth with a full purveyance.

The theory of the open carbon chain in chemistry and the closed benzene ring had been stated in the same year by Kekulé (1865). The astonishing advantages of this new outlet were first developed by J. van Hoff and Le Bel and were brilliantly applied by Hoppe-Seyler in the structural theory of Chlorophyl and to the "side-chain theory" of Ehrlich (1897). By this fortunate gateway in chemistry, it was not only possible to produce the 606 (Salvarsan) of Ehrlich, but Wassermann declared that without its aid his reaction (1906) could not have succeeded.

When the real significance of these discoveries was understood by the Magi, the scientific world at once became a melee of experimentation. Thousands of new dyes were developed for commercial use and inumerable additions to pharmacology, the majority of which have a more or less definite place in therapeutics. One of the recent accessions, and, from a medical standpoint, one of the noblest Romans of them all, was sulphanilimide (*Domagk*, Nobel Prize, 1835), the conqueror of the barbarian horde of the cocci and often an active enemy of the bacillus coli. Soon afterward a sister drug, sulphapyridine (1938), was brought out which was particularly effective in pneumonia, either with or without the serum treatment, which also came forward at nearly the same time.

The microscopists excelled themselves in the revelation of new bacteria by the use of the aniline dyes. Weigert (1845-1904) popularized the stains (1871-75), Koch published his method of fixing and dyeing bacterial films on the cover-glass (1877), his memoir on the etiology of traumatic infections (1878), pure cultures of microorganisms on gelatin (1881), steam sterilization, the discovery of the tubercle bacillus by special culture and staining methods (1881-82), together with a statement of the "Koch Postulates."

"That a particular dye should have an affinity for the tubercle bacillus, a hitherto unknown and unsuspected organism; that Koch had the imagination to devise the necessary combination of stains, the intelligence to realize the significance of the discovery and the genius which enabled

him to cultivate the minute rods, shorter in diameter than a blood corpuscle, is one of the miracles of science." (Cushing)

Although Koch was opposed by many of his embattled colleagues in his own and other countries, the younger generation traveled everywhere with stained fingers. The staining of slides was the standard test for tuberculosis together with the injection of guinea pigs and tuberculin until they were gradually displaced as a routine by the more simply used x-ray.

"Koch's Postulates," determine that the specificity of a micro-organism is not demonstrated without the conditions that: 1. The organism is present and discoverable in every case of the disease, 2. that it may be grown in a pure culture, 3. that inoculation from such culture must reproduce the disease in a susceptible animal, 4. that it must be re-obtained from that animal and regrown in a pure culture. Thus a universal law is laid down to control absolutely the necessitous relation between bacteria and disease.

Other men were not only equally busy and equally enthusiastic but eager to emulate the triumphs of Koch. New organisms were found by hundreds. Eberth discovered the bacillus of typhoid (1880), and Widal his reaction (1895) while immunization against typhoid was reported by Pfeifer and Kolle, with Edward White (1896). The bacillus of tetanus by Nicolaier and Kitasato (1884), and immunity to it and to diphtheria by v. Behring and Kitasato in 1880. The application of these discoveries to practice was followed at once by a reduction of 98% in the mortality. Metchnikoff (1884) reported the protective power of the phagocytes. Schaudinn found the spirocheta pallida (1905). Scarlatina was revealed as a streptococcal infection of the throat by the Dicks (1923), and immunization for it (1924). Pneumonia was broken down into 33 types according to the variety of germ present and by treatment with sera or sulphapyridine or both, the mortality has been greatly reduced. The use of maggots in the cure of septic wounds (World War) recalls the story of the Holy Saint who thought he was acquiring future merit by restoring to his festering sore, the maggots accidentally fallen therefrom. Thus medical practice continually sought new opportunities and through the wide spread evolution of science the Alchemist's "sleeve of Hippocrates" has become a broad carpet for modern medicine.

This epoch was dominated by bacteriology and chemotherapy. However, it will be noted that a fundamental revelation in one of the sciences is often followed by an indefinite series of associated or contributing factors, then the process flowers in a new system of great value.

The theory of immunity is based on an expectation of securing, by injection of an attenuated form of the causative organism, be it dead bacteria, an antitoxin as in diphtheria, or by vaccination as in smallpox, a distinct change in the living organism whereby it attains a resistance to a certain disease. The body in such cases becomes artificially allergic to attack by that germ or virus of disease. Jenner's monograph (1798) clearly explains this anaphylaxis, or allergy, but it took more than a century of study on immunity before there finally evolved a knowledge of allergy (Pirquet & Schick, 1803-6) which in itself disclosed a curious hypersensitiveness to various substances such as pollen in hay fever, food and drug idiosyncrasies which produce urticaria, angioneurotic edema and anaphylactic asthma either natural or acquired. It resembles in most cases the anaphylaxis of animals. This oversensitiveness is per se an abnormality, a disease which requires repressive treatment and desensitization and thus arose a growing group of specialists in the newborn doctrine of Allergy.

Earlier in the paper considerable stress was laid upon the "Cellular Pathology" of Virchow which may have seemed more than adequate for this review but it had a distinct purpose which will now appear.

In those paragraphs Virchow emphasizes the fact that there are no specific cells of disease but only modifications of physiologic types, such as degenerations, perversions, alterations in secretions, change in function, etc. Further that the cell being the ultimate morphologic element which manifests life, "we cannot, must not, transfer the seat of action to any point beyond the cell."

So it would seem that even with a full acceptance of the theory that the pituitary body is the conductor of the endocrine orchestra which sends its injunctions to the sympathetic system by way of the blood stream and thereby to other

parts of the body, yet it is possible to believe that all the recent discoveries which concern the endocrine glands and the changes therein, where the chemical messengers, hormones, arise, would naturally fall under the rule of Virchow's cellular laws.

These glands and their agency in the production of pathologic conditions have only recently come to receive the importance which now and in the future they may be entitled to have. Many disorders which accompany the hypo and hyper functions of this system are now fairly well understood as a short historic summary will indicate.

The Thyroid, by Graves (1833), Basedow (1840), Myxedema by Gull (1873) Metabolism increased in exophthalmic goiter by Müller (1873) Sajous, System of Medicine based on internal secretions (1903) The Parathyroid relation to tetany by Halstead (1909).

Pancreas, and Insulin by Banting (1923), Protamine zinc insulin (1936), Hormones from cortex of supra renal gland which may become a specific for Addison's disease (1930). Liver and liver extracts in pernicious anemia (Minot, Murphy and Whipple, Noble prize 1934). The Pituitary and acromegaly by Pierre Marie (1866). Dictator of all the other glands, Cushing (1910) Relation to diabetes insipidus, Cushing (1912) and hibernation by Cushing (1913). Growth hormone of anterior pituitary gland, Evans and Long (1921). Kamm's report on the isolation of two hormones, pitocin and pitressin (1928).

Gonads, Brown-sequard, 72 years old personally accepted (1889) an injection of testicular extract and the doctrine of internal secretion was born. Theelin, synthesized (1933).

Adrenalin, isolated by Takamine (1901).

Doisy and Allen (1923) standardized the ovarian hormone, folliculin, which produces estrus in spayed rats and mice. Aschheim-Zondek test for pregnancy (1928) by means of an estrogenic substance from the urine of pregnancy, and theelol (1931).

Testosterone, Laquer, Amsterdam, (1933) Testosterone propionate made from wool fat (1938). Hormones found to have anti-hormones to maintain physical balance (1934).

All these and others to be worked out have a high potential promise and of even greater success as the investigations become more clarified by experimentation.

The philosopher, Empedocles (450 B. C.) is reported to have raised the maiden Pantheia from the dead when she had lain thirty days "without breath." This feat added greatly to the fame of the operator but no mention is made of any advantage to the maiden nor yet to society. At present it certainly seems more noteworthy to take a cretin who is mentally dead and physically inert and by administering desiccated thyroid, a trifling incident in the day's work, to convert that poor victim into a more or less competent citizen, useful alike to himself, his family and the State. The study of glandular functions and repercussions is just beginning, and this extension of research will doubtless lead to a fortuitous flowering in the next century.

Research was also devoted to the lymph and blood. In particular Landsteiner received the Nobel Prize (1930) for determining the four types of blood which have become so essential in transfusion. The Russians, with their unlimited opportunities have developed a method of preserving the blood of persons suddenly killed, and using it months later from "blood banks," for transfusion.

So the battle swept on, grimly, effectively, and gloriously for the greatest profession in the world, and came down to the present with a flourish of trumpets over the renewed flowering of the perennial benzene ring by the introduction of the vitamins (Lunin 1880), and by a large band of followers beginning with Funk (1911), and the irradiation of foods with the ultra-violet light by Steenbock and Black (1924), and the Nobel Prize (1937) to Gyorgi for the synthesis of vitamin C. Thus the question long debated by faddists, enthusiasts, cultists, and others, over diets was finally put upon a scientific basis. It was no longer a problem either of nutrition or of belief but rather one of medicinal selection as to the food or vitamin that was needed, just as nicotinic acid in the food controls pellagra.

During this period other groups actively took up investigations of the various means whereby diseases are transmitted, and obtained remarkable results. Typhus fever which had always been a terrifying epidemic was found to be favored indeed by overcrowding, bad ventilation and poor food but the actual transmission, as might be expected from such an environment, was by the bite of a louse. Typhoid, due to food or water contaminated by Eberth's bacillus was easily preventible by sanitation and inoculation. Mountain fever was transmitted by a tick, the germs were artificially cultivated in 1937, meningitis in some forms due to the pneumococcus, and puerperal fever usually to the streptococcus hemolyticus by uncleanliness. Credé put drops

of a 1% solution of silver nitrate in the eyes of the new born and prevented blindness (1872).

Bubonic plague, due to the pasteurella pestis was communicated by rats and fleas but met by Haffkine's serum (1897), or atoxyl (1903), Measles was due to a diplococcus discovered by Ruth Tunnicliff (1917) who produced the disease in animals (1922) and developed a successful serum therapy (1927). Undulant fever traces to milk (McAlpine and Mickle), Infantile paralysis enters the body by way of the nose (Flexner 1936). Amebic dysentery from food and drink. Sleeping sickness due to a trypanosome and transmitted by the tsetse fly (Bruce 1894). Relapsing fever was found by Obermeier to be due to a spirochete (1873). This was an extremely significant event both directly and indirectly since the study of parasitic disease which it inspired resulted in the conquest of syphilis by Schaudinn, Ehrlich and Wassermann.

Many diseases which were not bacterial in origin were found to be caused by ultra microscopic viruses and often with cell inclusions. Among these were warts, trachoma, mumps, typhus and trench fevers, herpes, varicella and smallpox.

Yet in spite of all that was known, learned and understood by the years of research on typhoid fever in 1898, a terrible lesson was forced upon the American people. With complete knowledge of the cause, means of transmission and ease of prevention, our soldiers in the Cuban war, after an almost bloodless victory were swept off by thousands through an epidemic of typhoid. Why? Was it the political control of the doctors, certainly the army men must have known better. Is this to be the unescapable result of political control like the typhoid epidemic in the State Hospital at Manteno?

Malarial fever, produced by Laveran's plasmonium (1880) and known to be transmitted by the anopheles mosquito, impelled Dr. Gorgas, at Panama, to ask the directing engineer for screens to the cabins. "Screens, hell, what do we want of screens," replied the engineer, "it's shovels we need." Then "Teddy" was applied to, he promptly interposed, the screens were supplied, and the canal De Lesseps failed to construct on account of malaria became a great corridor of commerce.

Yellow fever, also arising from a filterable virus and spread by the stegomyia mosquito reveals a tale of patient, heroic and tragic research in science by the American doctors in Cuba after the war. Drs. Walter Reed (1851-1902), Carroll, and the unfortunate Lazear who died from an accidental bite, were the central figures. Here with a God-sent Governor-general who had been a doctor, the transmitting agent was found, Havanna freed from the disease, and America from the fear of an epidemic. This feat will always remain a splendid chapter in the history of medicine and a source of proper pride to the profession. Vaccination for yellow fever (Rockefeller Foundation 1937).

During this century, Illinois had grown enormously in wealth and prestige. The population had risen to (est.) 8,000,000 in the State and 4,000,000 in Chicago. The general mortality in the State had dropped to 10 per 1,000. Maternal mortality in the State was 2.9, in Chicago 2.5, and in the Nation 4.35. The mortality for infants was 38.4 per 1,000 in the State, and 31.3 in Chicago which is the lowest recorded so far in any large city in either hemisphere.

In the prolonged drama of medical progress which the world has gazed upon during the past century, scientific effort and enthusiasm of individuals and group have produced, in the harvest of thought and of benefit to humanity, an abundance infinitely greater than that in all the ages which preceded it. This era has covered intensively the whole system of the human body, its diseases and their remedies up to the final stage of preventing their onset. The trend at the present time is toward an elaborate and continuous investigation of the glandular structures, and the study of foods and vitamins as major phases of corrective and preventive medicine which is the dominant motif of this epoch.

Thus the application of medical science to the relief of human ills, without Government aid or political interference, has gone forward by leaps and bounds until in this year of Grace 1940, the result must be recognized as one of the greatest triumphs of civilization.

To attempt to include all the incidents, advances, improvements and revisions of this period in a few short columns; to think of repeating the wonderful narrative which Garrison has painfully compressed into somewhat less than five hundred pages would be useless and ill-advised. Our medical history is open to all. The

thought came however and remained that a brief survey of some of the most fertile and generative ideas of this memorable crusade during the life of the Society might serve to recall to the brethren those prodigies, both near and remote, begotten by their predecessors, and to stimulate a renewed appraisal of the hard earned victories which the Brahmin caste has bequeathed to us. This sentiment is peculiarly appropriate since it was wholly within the life-span of the Society that the Sun of Science rose with healing in his wings.

Upon a few rough ashlars of certified knowledge, laboriously delved from the mire of ignorance and superstition, the sturdy pioneers of the 19th century laid the foundations for the vast temple of modern medicine on the erection of which, the sons and grandsons of the founders have toiled for more than three generations.

The structure is still incomplete, but even so it lifts its lofty pinnacles to the skies and radiates the beams of scientific endeavor in every direction as a bright signal of success assured, and as a beacon of guidance to improvements hoped for.

Evolution and growth advance by such slow and imperceptible degrees that to those who are part and parcel of the movement, the fingers of time scarcely seem to stir. Yet when a backward glance reveals the length and roughness of the road, and lays bare in thought the wayworn thousands who have made that journey of grief and hope on the via sacra of science; if that retrospection also discloses the achievements and triumphs of recorded experience, no sloth or reluctance will be noted in the headway but rather a grand march, so logical in development and purposeful that the imagination must be spurred to a warm sense of admiration and thankfulness for the amplitude of the ultimate result.

Thus we remain safe in the hallowed arms of accomplishment but only as a prologue of vain longings to pierce the future. From the "topless towers" of the present edifice, securely based and durably cemented by demonstrated truths, one is fain to look out upon the medicine of the next century, yes, if only to feel the awe, wonder, and strained surmise that swept and muted the venturesome soul of old Balboa as he gazed upon the boundless waters of the Pacific from that surmounted peak in Darien.

PROGRESS OF SURGERY IN THE STATE OF ILLINOIS

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The history of surgery in Illinois began with a doctor who came to Chicago in 1835, a medical school chartered by him in 1837 which was opened in 1843, and a hospital established with his help in 1847. Chicago in 1835 was a muddy frontier village with less than 3,000 people. Twelve years later it was a medical center in embryo, through the vision of Daniel Brainard, pioneer surgeon of the Middle West.

Dr. Brainard's appearance when he arrived in Chicago the year following his graduation from Jefferson Medical College is described by a friend to whom he came for advice. He was "wearing pretty seedy clothes, was mounted on a little Indian pony, and was nearly out of funds." Two years later, at the age of 25, he was busy obtaining the second charter for an institution of learning that was granted by the legislature of this state. A year after that he was performing an amputation at the hip joint that attracted wide notice. By the time he was 31 he was president of the faculty and professor of anatomy and surgery at Rush Medical College, whose opening had been postponed because of a panic that started soon after he obtained the charter for it. Four years later he was rejoicing over the provision of better clinical facilities for teaching and care of patients through the opening of a 100-bed hospital.

The beginnings of the "medical center" were rude. The medical school was opened in two small rooms in Clark street and continued the next year in a building erected at Grand avenue and Dearborn street called the "rat-trap" because of its peculiar structure and center dome and costing $3,500. The hospital was opened in a warehouse at State and Kinzie streets.

Daniel Brainard even carried the fame of early surgery in Illinois abroad. In 1853 he read two important papers before the Society of Surgery of Paris, following which he was elected to honorary membership in that group and also in the Medical Society of the Canton of Geneva. A year later the American Medical Association awarded him a prize for his essay on the treatment of "ununited fractures and certain deformities of the oseous system." At the time of his

death from cholera in 1866 he was considered "the most commanding figure in medicine and surgery in the great Northwest."

Medical education projects were started in two other parts of the state about the same time that Dr. Brainard was planning to open the school in Chicago. The others were short-lived, however. Dr. G. W. Richards opened in the fall of 1842 the Franklin Medical College at St. Charles. Illinois College at Jacksonville opened a medical department in the fall of 1843, with Dr. David Prince as professor of anatomy and surgery. Both schools dissolved for a reason which throws light on the slow progress of the art and science of surgery before the middle of the nineteenth century. The people in the communities hated the schools because the students robbed the graveyards to procure anatomical material for dissection. It was the only way they had of getting it. Sometimes the professors were suspected of conniving. Dr. Richards was mobbed and forced to leave St. Charles in ignominy after grave robbing by students. He went to Rock Island, where, in 1849, he started another school which later moved to Davenport and soon went out of existence. Quincy had a medical school for eight years, between 1882 and 1890. In Galesburg courses were offered for one session in 1903 in a medical department of Lombard College.

Dr. Nichols Hard, a member of the faculty at Franklin Medical College, St. Charles, gained wide reputation as an anatomist and surgeon. One of his achievements was successful performance of tracheotomy on a child who was threatened with death because of acute inflammation of the windpipe following a fall into a cistern. Dr. David Prince of Jacksonville was also a pioneer surgeon and anatomist, who established in that place a sanatorium for the treatment of surgical cases and chronic diseases.

Surgery progresses through the men who practice it, chiefly, and the most brilliant of these men tend to excel in teaching to others what they have learned from study and experience. Hence, it is in the medical schools and the hospitals which provide clinical facilities for them that we look first for surgical leaders.

Chicago of the early days had two rival schools —Rush, and Chicago Medical College, opened in 1859 as the medical department of Lind University and eventually to become Northwestern University Medical School. Connected with the first we have the name of Brainard, and later that of Moses Gunn, who succeeded him in 1866 as professor of surgery. In the latter, Edmund Andrews, who became the leading operating surgeon in the Middle West following Dr. Brainard's death, was professor of principles and practice of surgery, resigning in 1899 after forty years' service.

In 1877 and in 1878, respectively, Franklin H. Martin, who was to conceive the idea of forming the American College of Surgeons thirty-six years later, and John B. Murphy, who was to become one of America's greatest surgeons, began their medical education and, interestingly enough, for our purpose, they chose different schools. Murphy's biographer, Loyal Davis, records that after hearing his first lecture on surgery from Professor Gunn, Murphy pronounced him "magnificent" and after his first surgical clinic he immediately aspired to become a surgeon and to "operate like Gunn."

Martin at Chicago Medical College was watching Edmund Andrews perform operations in the old amphitheater at Mercy Hospital, which was located in the same block. Of him Dr. Martin wrote in his autobiography:

"Professor Andrews was in the midst of his experiments with antiseptic surgery, and every operation was the signal for a trial of new theories. This great man would shuffle into our little sitting room and speak with us, as though we were his equals, of the thoughts that were running through his scientific brain. We were stimulated to read and to discuss at length everything on antiseptic surgery and Lister's theories that could be found in current medical literature."

Murphy interned at Cook County Hospital and Martin at Mercy Hospital. Loyal Davis describes the County Hospital of those days as follows:

"The hospital had no equipment except a large amount of medicines and an adequate supply of material for bandages, splints, and sutures. There were no microscopic or clinical laboratories apart from the drug room. Laboratory diagnosis was unknown except such procedures as were connected with the chemical examination of urine. Asepsis was unknown. Interns in touch with cases of erysipelas and gangrene, or engaged in postmortem work, were assumed to have no connection with obtetrical cases, but there was no stern rule against it and they thought nothing of maintaining friendly relations with laudable pus. Puerperal infections were frightfully frequent and deadly, and as a result the obstetrical ward was closed on many occasions for weeks at a time. . . Surgery was distinguished by bold ligations of blood vessels, amputa-

tion of arms and legs and cutting into the urinary bladder for stones. McDowell in Kentucky had but recently recorded his experiences in performing the operation of ovariotomy. The abdominal cavity, though, was far beyond the surgical possibilites of the day. If Nature did not intervene, the unfortunate patient with a tumor or inflammation of any of the abdominal viscera was in a hopeless condition. Heaven knows that if Nature did not intervene man wouldn't. But if it comes slowly, progress does come to surgery. With Lister's methods being adopted in spite of diehards, gangrene and running wounds were disappearing rapidly. Anesthetics, too, added greatly to the advances made in surgery. Whereas surgeons had had to rush through an operation at lightning speed and under great disadvantages, they now were able to take their time. The days of sleight-of-hand feats were over, and the prestidigitations which had made many surgeons famous were giving way to careful, deliberate procedures."

On the staff at Cook County Hospital was a lecturer and demonstrator in pathologic anatomy whom Murphy came to idolize. Every Thursday evening he, Frank Billings, and a few other internes, met with Christian Fenger at his home, to examine under the microscope and to discuss sections of diseased tissue. The time came when Dr. Billings was to write of Dr. Fenger:

"Dr. Fenger has done more for medicine and surgery in Chicago and the Northwest than any other man."

Another eminent surgeon with whom medical students and internes of that day came in contact was William Heath Byford, president of the faculty of the Woman's Medical College which he had helped to found in 1870, and professor of obstetrics and gynecology at different times at Rush and Chicago Medical College. He was known as the first in this country to advocate stitching the open sac to the abdominal wound after enucleation of cysts of the broad ligament.

Professor of anatomy at Rush until 1859, and thereafter at Chicago Medical College, and one of the founders in 1882 of the College of Physicians and Surgeons of Chicago, later to be the College of Medicine of the University of Illinois, was Robert L. Rea, who, Dr. Billings said, "Seized upon all the rapidly increasing innovations in surgery and adopted them, for his scientific spirit caught and adopted the sensible ideas of aseptic and clean surgery even in those days."

Appointed to the chair of surgery at Rush Medical College at the death of Dr. Gunn in 1887 was Dr. Charles Theodore Parkes, of whose contribution to surgical progress Dr. Murphy wrote:

"To Professor Parkes belongs the honor of having made the first scientific experimental research on gunshot wounds of the small intestines, in the West. His work was so thorough and so complete that it laid the foundation for many of the subsequent practical appliances for the repair of intestinal lesions. . . His work in the surgery of the gall-bladder, which was then in its very infancy, was no less conspicuous in influencing the profession in the proper direction."

Dr. Parkes died at the age of 48, in 1891, and was succeeded as professor of surgery and clinical surgery at Rush by Nicholas Senn. John B. Hamilton was at the same time appointed professor of the principles of surgery and clinical surgery. The former helped to develop the modern ideas of the use of surgery in tuberculosis, furthered abdominal surgery through extensive experimental work, and added greatly to the knowledge of intestinal perforations and their treatment. The latter was one of the first surgeons to introduce newer methods of herniotomy. In 1895 he performed the second successful operation for suturing intestines following a wound by a pistol shot.

The students of the early '80s were now becoming the masters of surgery. In 1892 John B. Murphy joined the faculty of the College of Physicians and Surgeons as professor of clinical surgery. Franklin H. Martin had been professor of gynecology and clinical gynecology and abdominal surgery at the Postgraduate School, later to be known as the Postgraduate Medical School of Chicago, since he helped to found it in 1889, having previously been professor of gynecology in the Chicago Policlinic, founded in 1886. Surgery had progressed to the point where school days were never to be over for the conscientious surgeon. Medical educators such as Murphy, Martin, Nathan S. Davis, Sr., W. Franklin Coleman, A. Reeves Jackson, J. H. Hollister, L. L. McArthur, Fernand Henrotin, Christian Fenger, Henry T. Byford and Albert J. Ochsner were looking beyond the undergraduate and the interne to the need of the surgeon in practice for further training. Postgraduate schools and clinics, and eventually, in 1910, the forming of the Clinical Congress of Surgeons of North America to sponsor the holding of clinical meetings, were the result.

In 1940 we have in Illinois the second greatest medical and surgical center on the continent.

The state has five approved medical schools and a postgraduate school. We have nine hospitals, all in Chicago, approved for graduate training in general surgery and the surgical specialties. We have throughout the state 136 approved hospitals, located in 54 different communities, on whose staffs are surgeons who have been trained, many of them, in the state's own medical schools and by its own eminent surgeons. Surgeons of Illinois have been quick to adopt in practice the improved surgical techniques developed elsewhere, and have been equally ready to spread abroad the news of their own discoveries.

Not the least of the evidences of progress of surgery in the State of Illinois is the strength of medical and surgical journalism here, which in prolific measure brings to every physician and surgeon wherever he may be located, the new facts and theories that constantly arise. Ease of communication of ideas, through operative clinics, surgical motion pictures, demonstrations, lectures, and the printed page, is a powerful influence in bringing surgery in the average sized community up to the standard of that in the large cities. Coupled with better initial training of the surgeon, through the organized graduate training programs which more and more hospitals are offering, this influence is the greatest single factor in assuring to every patient the best possible surgical care and that goal is one toward which progress has certainly been rapid in the past century in Illinois.

A CENTURY OF TUBERCULOSIS IN ILLINOIS

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How clear is our picture of the prevalence and ravages of tuberculosis in 1840? The picture is not clear, and in order to bring out the highlights, fact must be charged with some fantasy. In Chicago, until ninety-nine years ago, there was no attempt at vital statistics. A town of four thousand odd inhabitants, too involved in life to think of death, is not interested in mortality enumerations.

In 1841 a Chicago City Council ordinance required physicians to give a certificate of death, and named the city sexton's office as the repository of these certificates. In the sexton's records there is little reference to tuberculosis.

During the period from 1840 to 1850 tuberculosis failed to impress itself upon the public mind. Tuberculosis in those days was regarded not as a contagion but as hereditary, a family affair, and was unheralded by panic, unaccompanied by repulsive stigmata. It was consumption, a wasting; euphemistically a decline. Even had it been recognized as a contagion the disease was of too pale a texture to hold its line in history against the drama of the scourging epidemics, of too weak and insidious an onset, of too meek a course to stand out against the scarlet fever of 1844, the smallpox scare of 1848, the cholera of 1849, '50, '52, the smallpox of 1854 and '55, the cholera of 1854, the typhoid of 1856, the malaria that reached its peak in 1857 with a mortality of 53.6 per 100,000.

It was a period of business as usual between panics, of speculation, gambling, growth, clapboard houses, plank roads with muddy sidewalks and puddled streets, concomitants of the low, swampy land. The paralyzing financial crash of 1837 was being forgotten. Around 1842 business picked up, the population increased to 6,248 and the potato patches sold at a premium as building lots.

Despite the epidemics, the terrific mortality of certain years, an annual death rate of 73.8 per 1,000 in 1849, 64 per 1,000 in 1854, the forties and fifties were growing years, the population increasing from 4,470 in 1840 to 109,260 in 1860, an increase of 2,344 per cent. With the growth in inhabitants came an extremely fast economic and cultural development.

The Chicago Morning Democrat, the Chicago Daily Journal and the Chicago Tribune were founded in the forties. Cyrus McCormick came to town to promote his reaper and Horace Greeley to attend the River and Harbor Convention of 1847. William B. Ogden won his epochal struggle against the plank road advocates and in 1849 his dream of railroad transportation came true in the erection of a one-story, frame depot at Kinzie and Canal Streets. Came the gold rush and adventurers arrived daily, camped on the outskirts to pre-

pare for the trek across the prairies, threw refuse and dead animals into the river and shattered the health canons as they waited for the wagon factories to catch up with them.

Faced with cholera, typhoid, smallpox, dysentery, working in etiologic darkness and spurred by panic, the early Chicagoans filled in swamps, raised levels, constructed sewers and built pumping stations. Throughout the state the recurring epidemics engendered similar preventive efforts. Along the Mississippi, 1839 was known as the "sick year."

Both in the state and Chicago, the power and efficiency of the created health agencies waxed and waned in direct proportion to the seriousness of the epidemics. In 1834, in the face of a cholera scare, a temporary board of health was established in Chicago; in 1835 a permanent board, consisting of 7 members, was established and continued when the city was incorporated in 1837.

In 1842 a city hospital was built at a cost of $200; in 1845 an added $300 was spent for expansion. In 1847 the first general hospital, known as Tippecanoe Hall, was started at North Water and Dearborn Streets. In 1848, Dr. H. S. Huber was appointed city physician "without salary." In 1852, with 630 cholera deaths, and smallpox prevalent, the city physician's salary was fixed at $500. Not until 1866 and a fresh cholera epidemic did the sanitary duties return to the medical profession when Dr. T. B. Bridges was appointed health commissioner and given 32 temporary assistants.

Downstate the pendulum swung less wildly between feverish effort and lethargy. In 1840 activities were generally stepped up throughout the state and at Springfield preliminary meas-

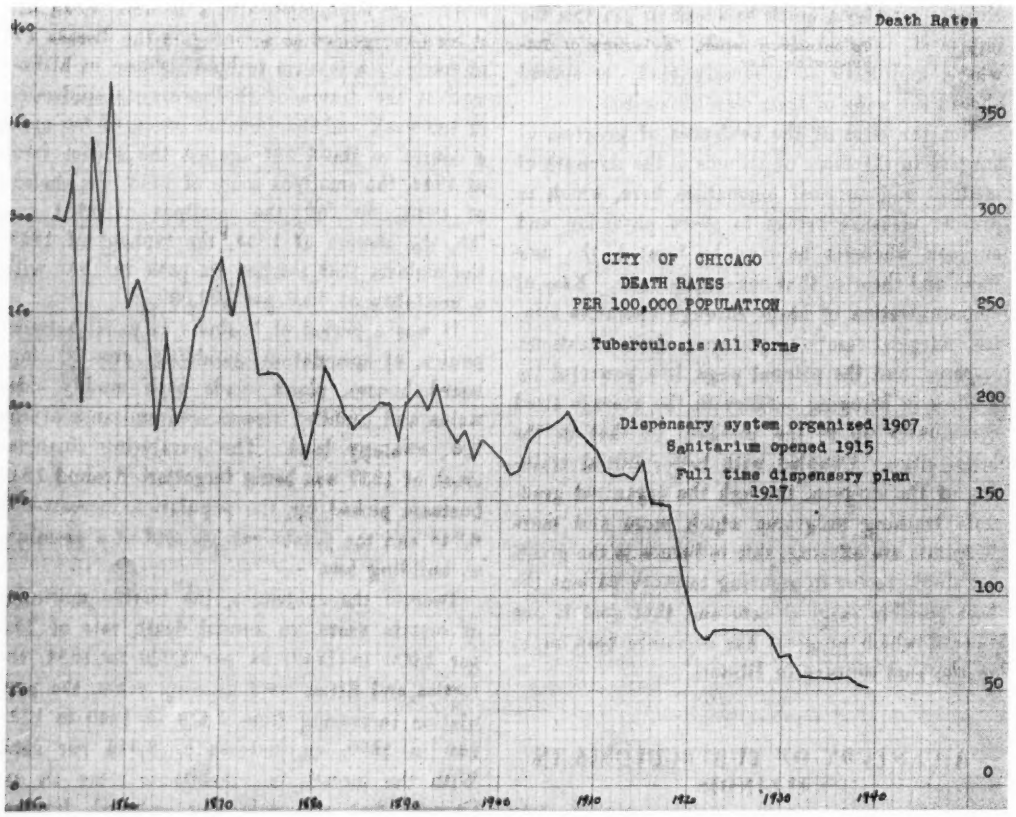

Figure 1—Tuberculosis Mortality Rates (All Forms)
City of Chicago
1850-1939

ures were taken to organize a state medical society. This signalized the awakening of a health consciousness. In the fifties, immediately following the organization of the Society prevention was accentuated. Boards of health were organized at LaSalle, Peru, Rockford, Belleville and other centers.

In Chicago and throughout the state, during the era of alternating growth and panic, 1840 to 1870, the figures that stand out with special prominence in the public health picture are those of Dr. Nathan S. Davis, Dr. John W. Rauch and E. S. Chesbrough, chief engineer for the sewage commissioners.

But what of tuberculosis? Even evangelist Davis has little say of it. Nor does Rauch, despite his immense preventive drive against disease, pay any attention.

Occasionally, however, tuberculosis peeps through the medley of the epidemics. In 1829, in the first record of morbidity statistics for Chicago, the United States Army reported 11 men of the garrison sick with diseases of the respiratory organs. In 1836, Peck, in his Guide for Immigrants, advocated the great outdoors for health and lit for a moment on tuberculosis, took a step toward phthisiotherapy and, as it happens, a wrong one. "It is common," he says, "for a frontier man, whose health is on the decline, and especially when indications of pulmonary affection appear, to engage in a hunting expedition to renovate his health."

Around 1850, when the first official mortality record was published, the picture clears but for the twofold reason that burials outside of the city were not recorded and that the records were still being kept by the city sexton, tuberculosis reports are both inadequate and inaccurate.

In 1851, with a population of 34,000, the tuberculosis death rate in Chicago was given as 123.5 per 100,000. In 1852 it had risen to 300 per 100,000, a figure which it approximately maintained until 1855, when it fell to 202, rising again to 342 per 100,000 in 1856 and to 371 per 100,000 in 1858. By 1866 it had again dropped to around 200 per 100,000, rising throughout the following decade to 274, again dropping back, at the end of the decade, to around 200.

The figures jump around too much to be convincing. Some say that the hardy, pioneering stock in early Chicago should show a low incidence; others feel that overcrowding stepped up the incidence, that the Indian aided in dissemination, but of this one may be skeptical and we do not know whether the infection, to any serious extent, had traveled westward through the tribes. It is more reasonable to suppose that the whites disseminated the disease amongst the Indians rather than vice versa. The Indians were, by far, the more susceptible race and the degree of contact necessary to promote actual disease was consequently less.

For the seventies and eighties the reports are rather startling. In 1875 Springfield showed a tuberculosis mortality of 275.6 per 100,000, 190.8 per 100,000 for 1876 and 239.2 per 100,000 for 1877. In 1881 Rock Island had a tuberculosis mortality of 325 per 100,000. In 1887 the rate for Rockford was 141.8 per 100,000. Quincy in 1875 had a tuberculosis mortality rate of 330 per 100,000 and a mortality in 1876 of 469 per 100,000. Even with Slab Hollow and the general picture of communicable disease as background, these figures for Quincy seem extremely high. Over the seventies and eighties many of the downstate towns showed a higher tuberculosis mortality than Chicago.

It seems strange that the extremely high rates over this period, 1860 to 1880, did not arouse a greater public interest and stimulate some attempt at preventive measures. On July 1, 1877, two state laws, one known as the State Board of Health Act, the other as Medical Practice Act, both implemented by the board of health, organized July 12 of the same year, became effective. But the tuberculosis program was still largely untouched.

Dr. John W. Rauch, secretary of the State Board of Health, who served almost continuously from 1877 to 1891, never locked horns with the disease. With an insight that transcended state and national boundaries and saw the whole world as a health unit, Rauch spent all his wealth of organizing genius in the epidemic field. For him and for workers of similarly fine calibre throughout the country, 1882 and Koch's epochal discovery should have lit the torch and brought it to a flame.

The concept of tuberculosis as a contagious disease, adumbrated by Cohnheim and Klencke, established by Jean Antoine Villemin, con-

firmed by Koch in the best scientific paper ever written, failed to gain general acceptance even in the profession. Control of the focus as the preventive measure! This rudimentary concept in tuberculosis epidemiology found no sure foothold in the public health mind of the eighties and nineties, and it has found no sure foothold today.

Intellectually we recognize that tuberculosis is an infectious disease. Practically—deceived as were our forefathers by the meek demeanor of tuberculosis—we ignore the implications. Few sanitarians are inclined to take a strong stand on tuberculosis. Tuberculosis still remains a major cause of death—for certain groups, as the Negro, a leading cause. The disease is preventable and Koch gave us the formula, but it remains as the leading public health blunder. The 12,000,000 Negroes of the United States show a tuberculosis mortality in line with the worst rate of one hundred years ago.

A certain amount of progress in tuberculosis control has been made. We failed to follow through with Koch but we started. Throughout this country as abroad, the public health conscience became aware of tuberculosis and the anti-tuberculosis organization came into being. Dr. Lawrence F. Flick, working in Philadelphia in 1892, seems to be the pioneer in initiating the world-wide anti-tuberculosis movement. Similar societies were soon formed in European cities, in America state organizations were founded, and now there is hardly a civilized nation in the world that lacks a special society of this sort. These are private enterprises, supported by contributions. In only New York City and Chicago has any material assistance been received from paid health officials. The leadership comes from public-spirited citizens, too often by a non-medical man. As individuals, many members of city or state health boards have taken an active part.

However, both in his private and public capacities Dr. James A. Egan, secretary of the Illinois State Board of Health from 1897 to 1913, was a force in early tuberculosis work. Influenced undoubtedly by Dr. Theobald Smith through a report to the governor in January 1899, he outlined procedures for herd inspection, with penalties against owners who failed to report sick animals, and agitated for legislation on tuberculin testing of herds, which became a reality in May, 1899. In 1898 Dr. Egan made the first mention of a state sanatorium. Though he aroused sufficient interest to force the matter before the legislature, the idea was dropped.

To Dr. Theodore B. Sachs and Harriet Fulmer of the Visiting Nurses Association belong credit for the early tuberculosis activity in Chicago. Through Harriet Fulmer's efforts the Tuberculosis Committee of the Visiting Nurses Association was organized in 1903 and remained active until 1906, when the work was taken over by the Chicago Tuberculosis Institute. Miss Fulmer refused to see obstacles, and opened the Glencoe camp in the summer of 1905. She wrote, "The tuberculosis work has been the largest problem of the year. What to do with the hundreds of hopeless cases that come to us is indeed one of our trying situations?" In 1908 she wrote, "As many know through the general appropriation of $2,000 by the board of directors of this association four years ago (1904) a Committee on the Prevention of Tuberculosis was formed from which sprang the Chicago Tuberculosis Institute which stands today a child of our own efforts."

The Chicago Tuberculosis Institute was the child of the Visiting Nurses Association and the Municipal Tuberculosis Sanitarium is the child of the Institute in the genesis of which Dr. Sachs was particularly active. In 1900 he found the first tuberculosis clinic in Chicago—Tuberculosis clinic of the West Side Dispensary of the Jewish Aid Society.

Dr. Sachs was an advocate of the survey and with his dispensary work, undertook a house to house survey in an 8 acre congested district and found 54 new cases. A later more extensive survey uncovered 1,016 cases.

In 1898, while Dr. Egan was busy downstate and Harriet Fulmer and Dr. Sachs were turning over every loose stone in Chicago, the writer, with Dr. C. M. Wood, was in charge of the old Dunning Tuberculosis Hospital, started in 1894 as a pavilion in connection with the county poorhouse, the first county institution for segregation of the tuberculous in Chicago and I believe in the country. In 1898 the building housed around 250 advanced cases and the con-

ditions inside the institution had better be left to the imagination.

In 1898 the 275 beds at Dunning were our whole tuberculosis accommodation. In 1900 the Children's Memorial Hospital and the Hospital for Crippled Children accepted some children with bone tuberculosis and the County Home for Incurables had about 60 or 70 beds for terminal cases.

Throughout the state, hospitalization was no better. In 1900, Dr. Egan's proposal for a state sanatorium came again before the state legislature but failed to gain the governor's approval. Again it was up to the private individual. Downstate, as in Chicago, the first step was undertaken by men unconnected with the official bodies. It is generally agreed that Dr. J. W. Pettit was the standard-bearer for Illinois. He opened his Ottawa Tent Colony in 1904 and proved that the Illinois climate was not incompatible with cure. This was the first sanatorium in Illinois, and Dr. Pettit's results and enthusiasm led to the organization of the Illinois Tuberculosis Association.

Meanwhile, in Chicago, the drive for accommodations was on. In 1903 St. Anne's Hospital was opened, with 50 beds for tuberculous patients. Harriet Fulmer opened her Glencoe Camp about this time, and these two departures constituted the sole additions for some years. The minds of the laity had to be conditioned.

The people had heard something of tuberculosis. From 1905-1907 when Dr. Charles J. Whalen was commissioner of health, might be called the period of organized, intensive propaganda. With the second lowest annual death rate from all causes in the history of the city, the health of Chicago, on the whole, was good, and public interest, with proper management, could be centered on tuberculosis. With Dr. Whalen, Dr. Sachs and Harriet Fulmer as leading propagandists, the program of education took form with a tuberculosis exhibit in the public library, a study of tuberculosis in Chicago published by the City Homes Association and the aid of the press which was a great factor. In 1906 the Bulletin of the Department of Health was first circulated weekly. The milk depots were rigorously inspected and food inspection stepped up. For the first time milk from dairy farms was examined bacteriologically.

About this time the Chicago Tuberculosis Institute took over the activities of the Tuberculosis Committee of the Visiting Nurses Association. In 1907 and 1908 the Institute, supported by church, hospital and social organizations, inaugurated its 7 part-time dispensaries. Through this period Dr. Whalen, Dr. Sachs, Harriet Fulmer, the Institute were working indefatigably toward increased tuberculosis accommodation.

Much progress was made in preparing public opinion for the Glackin Act, some progress was made in provision of immediate facilities. Dr. Sachs opened the Edward Sanatorium at Naperville in 1907 and the Winfield Sanatorium in 1909.

There was a distinct increase in anti-tuberculosis activity throughout the State. The sale of Christmas Seals was inaugurated by the Illinois Society for the Prevention of Tuberculosis in 1905. The seals were effective in stimulating interest over large areas. In the same year downstate made tuberculosis a notifiable disease and an ordinance passed in Peoria required report of tuberculous individuals.

In Chicago Dr. Sachs and his co-pioneers were still working for a statewide program of field and sanatorium care. The new cases found in the surveys and by the dispensaries accentuated the problem and its magnitude was fully publicized. Success came: the public mind was saturated; the Glackin Act, the legislation under which the Municipal Tuberculosis Sanitarium still operates, was passed in 1908 and became effective in a short time. On September 1, 1910, control of the 7 dispensaries of the Chicago Tuberculosis Institute was assumed by the sanitarium.

Because the Municipal Tuberculosis Sanitarium has entire responsibility for control and management in the city, the story of tuberculosis in Chicago and the story of the sanitarium are identical from now on and include work of the various health commissioners since 1908, most of them members of the sanitarium board and intimately connected with its development and progress. Dr. William A. Evans, the first of these commissioners, with Dr. Sachs and Harlow N. Higginbotham, formed the original

Board of Directors of the Municipal Tuberculosis Sanitarium, which met first on April 22, 1909.

Evans left a deep impress on the tuberculosis program in Chicago. When the writer first became intimately interested in tuberculosis, Dr. William A. Evans was one of the outstanding public health figures of the country. Commissioner of health from 1907 to 1911, he effected innovations which are still effective in tuberculosis work: the enforcement of the report, the pasteurization of milk, the score card system of dairy inspection, systematic bacteriologic examination of milk supply, testing of pasteurizers, the prohibition of bulk milk sales.

Evans saw the impracticability of attempting to meet accommodation needs with new construction, and tried to link the tuberculosis program with the general hospital. This thought, pushed aside in 1907, is one of the dominant principles today. As a result of his efforts the city rose to preeminence in tuberculosis work and in 1907 Chicago was awarded a silver medal by the International Congress on Tuberculosis for the control measures enforced.

Toward the end of Dr. Evans' period as health commissioner, November 11, 1911, the construction of the sanitarium at Bryn Mawr Avenue and North Pulaski Road was begun on the 160 acres there. The gates opened to patients in March 1915.

Dr. George B. Young, the health commissioner under Carter Harrison and the incumbent at the time the sanitarium was actually opened, had no very intimate connections with the movement. Nevertheless, aided by Dr. Gottfried Koehler, the assistant health commissioner, he made his contributions largely on the enhancement of Evans' milk control measures.

The year 1915 and the early days of the sanitarium bring a restless, progressive, forward-looking personality with inspiration and a touch of circus, Dr. John Dill Robertson.

Dr. Robertson, a promoter, an organizing wizard of great initiative, supreme self-confidence, in public health was successful. Though his methods and technic were not always beyond censure, his objectives were sound, his procedures effective. With equal zest be built and demolished, tore down the work of others but also his own design. He had vision and the results testify for him. The tuberculosis program is the better for Dr. John Dill Robertson. Weighing all things, were I asked to name the greatest health commissioner Chicago ever had, I would vacillate between Dr. Evans and Dr. Robertson and, perhaps, finally flip a coin.

During Dr. Robertson's time the sanitarium accommodation was increased from 650 to 800 beds; the full-time dispensary plan was inaugurated; the infectiousness of tuberculosis was preached; the state regulations amended to prohibit intimate family contact between the open case and the child, and practical isolation of open tuberculosis was attempted.

As far as my knowledge goes, Dr. Robertson was the first man who really attempted to enforce his conviction that tuberculosis was a contagious disease and so fought newspaper opinion, public opinion and won. His amendment of the state regulations meant business. To enforce isolation of refractious open cases he sent an ambulance, the "Black Maria" with attendants to forcibly remove the recalcitrants from their homes and children. This started an uproar. The departure was deemed inhuman and so rated in the press, and in the homes there were lamentations, yells, fist fights, and knife-play. Dr. Robertson remained unmoved. To all he had only one answer, "Better the restraint of one sick individual than the certain doom of the family."

Today segregation is accepted. The procedures inaugurated by Robertson are operative in their original form and enforced hospitalization is resorted to when necessary. As of January 1, 1940, there were 3,947 known open cases in Chicago, only 35 of them in contact with children, all these latter in process of clearance. In only 9 instances was forcible hospitalization used.

Attempting to make the compulsory report really compulsory, Dr. Robertson established a hearing board to which every doctor who failed to report a case was summoned. The questions asked by Edgar A. Jonas, later Judge Jonas, then attorney for the sanitarium, were embarrassing and provocative, and the possibility of a jail sentence made the hearing board unpopular but it worked; reports jumped.

Dr. Robertson had the epidemiologist's angle toward the discovery of new cases. Like Sachs

he was an advocate of the survey. In 1916 a house to house survey of 8 square miles disclosed 14,282 new cases of tuberculosis in 165,700 people examined. The survey was made largely without the x-ray and many cases diagnosed as tuberculosis were later dismissed. It is significant that 7,000 cases were found in children. He also conducted a housing survey during which 22 blocks in the tuberculosis survey areas were examined but no direct relationship between tuberculosis and housing conditions was found. A spot map of Chicago today would show very much to the contrary.

In the protection of milk supply Robertson followed Evans and, taking advantage of an epidemic of infantile paralysis, ordered pasteurization of all milk and cream. In his drive to purify the milk supply he drove many of the recalcitrant milkmen out of business. The reform was necessary. Many of the smaller milk handlers were careless, dirty and refractory to sanitary advice.

Robertson knew how to choose his help and how to expand to the fullest the potentialities of his workers. Associated with him in his tuberculosis work was Dr. Grace S. Wightman, an influential figure who had much to do with the early development of the sanitarium, and was largely responsible for the success of the full-time dispensary, the establishment of the statistical system and the field program. She laid the groundwork of the plan which regulates the field activities in Chicago today. Dr. Wightman served the institution from March 15, 1917 to October 23, 1923.

In 1912, under the auspices of the Illinois Federation of Women's Club, a tuberculosis survey was made throughout the state, in 1913 a milk ordinance was passed in Cairo, in 1914 Dr. St. Clair Drake was appointed Director of the State Board of Health and stepped up all health activities.

Dr. Drake, a man of quiet demeanor but deep inward resource, instituted lasting reforms and greatly improved the health organizations throughout Illinois. He was an excellent health educator and used the state fairs, baby conferences, exhibits, motion picture and stereoptican slide shows, newspapers and state publications such as the Health News.

Dr. Drake was replaced by Dr. Isaac Rawlings in 1921. Considerable advance had been made in tuberculosis work over the state. In 1915 it was made a reportable disease by the State Board of Health, a survey was made of White County by the Illinois State Association for the Prevention of Tuberculosis, the municipal tuberculosis sanatorium at Peoria was endorsed by popular vote, and the Rockford Tuberculosis Sanatorium was opened. The law extending the Glackin Act to counties resulted in additional accommodation. The following year 8 counties took advantage of the law and in 1918, 33 counties.

At the close of 1927, of the 46 counties working under the Glackin Act, 15 owned their own sanatoria, the remainder using the funds to hire sanatorium care for their charges. In 1919 the first county tuberculosis sanatorium, created under the provisions of the Glackin Act, opened at Ottawa. In August the county sanatorium was opened at Bloomington.

Since 1918 the tempo of new construction has slowed down, the hire system is static. The period, 1918 to 1931, is one of consolidation.

In Chicago the leading figures in tuberculosis work were Drs. Herman N. Bundesen, James A. Britton, and Benjamin Goldberg. In infant welfare, food inspection, milk and dairy control, general epidemiology, Dr. Bundesen's work over the period was outstanding. Many of his public health procedures have formed the pattern for similar work throughout the country, and his influence in consolidating the tuberculosis gains was immense. He made the police power of the health department available to the sanitarium, and generously cooperated in quarantine and isolation. On the board of directors of the sanitarium from 1922 to 1926, with the collaboration of Dr. Britton from 1923 to 1926, he kept the institution on an even keel.

Dr. Goldberg, secretary of the board of directors, 1927 to 1931, continued the good work and added valuable contributions. He established a school of nursing, an undergraduate and postgraduate school for students and physicians at the sanitarium, reformed the dietary plan, stepped up vocational training and the sanitarium tempo, as a whole.

Meanwhile, the tuberculosis death rate with the trend everywhere, fell consistently for Chicago and the state. In 1915 the mortality rate

in Chicago was 170.6. By 1931 it had fallen to 66.2. Similar decreases took place throughout the state. At Springfield the rate fell from 157.6 per 100,000 in 1915 to 80.3 per 100,000 in 1926. In the state the rate decreased from 128.1 in 1915 to 62.5 per 100,000 in 1930. During most of the period the rate for the state was below the average and that for Chicago was the lowest of any large city in America.

We are largely at a loss to account for the causation and dynamics of the tremendous drop in tuberculosis mortality during the last twenty years. In 1880 a rate of 346 per 100,000 prevailed at Berlin, 800 per 100,000 in Budapest, 679 per 100,000 in Vienna, 629 per 100,000 in St. Petersburg and these rates were halved by 1900, during a decade when the anti-tuberculosis crusade was not effectively operative and the velocity of the fall over this period parallels the fall from 1917 onward.

The accompanying graph represents the mortality curve in Chicago from 1852 to date. The various panics and depressions did not seem to exercise much influence. In the panic years 1873, 1893, 1907 and 1929 a slight increase in mortality was followed by a drop. Nor did the World War seem to exercise an influence. The steepest decline was from 1918. Tuberculosis appears to be a disease wearing itself out rather than a disease conquered.

Within the last twenty years, trends and attitudes toward certain phases of tuberculosis work have changed. Around 1917 to 1920 the early case constituted the desideratum for sanatorium admission. The late case, considered hopeless, was relegated, when cared for at all, to the tuberculosis section of the county or municipal hospital. As the idea of tuberculosis as a contagious disease grew, as the necessity for hospitalization became apparent, the scope of the sanatorium widened and the advanced case developed an increasing ratio of admission. Since around 1931 there has been a growing acceptance of collapse therapy for tuberculosis in all stages and today the late case is no longer a pariah.

The national organization through its branches has exerted a tremendous influence in the publicity and educational campaigns that brought our present tuberculosis organizations into being. The pioneers in the various cities and centers, working through the local branches stimulated public interest, aroused public enthusiasm and engineered legislation, which are the province of the local organizations. In this province they excel. The pioneering bodies that built the institution can, and should support it afterwards. The municipal or county institution should continue to receive this special type of help and benefit from the skill and experience of the branch associations. In any city the local branch of the national and the established institution should work harmoniously together.

In too many instances this is not the case. The branch frequently deviates from its function of organization and education and strikes out on new and unfruitful lines. Instead of one inclusive organization with two independent though correlated subdivisions, there are, within the community, two distinct tuberculosis organizations, often hostile. The established municipal or county institution needs propaganda help toward larger funds and assistance in educational programs.

This is the type of help advocated by the national association for its branches. It should be available. Often it is not. Not content with completely ignoring the established institution, sometimes the branch plagiarizes results, duplicates existent programs with innocuous facsimilies and dummy reproductions and attempts generally to create the impression that the seal-selling organization is the one charged with the actual work, takes all the credit for the work done and capitalizes on this for the sale of Christmas Seals. As a result, the public is confused, and the drive toward the goal is halted.

An interesting decade in tuberculosis history is that from 1930 to 1940. Following the decade of consolidation and organization, it shows new developments, the first and most outstanding of these being acceptance of collapse therapy.

Prior to the present decade the application of collapse therapy was patchy and for the great majority of patients unobtainable. Such as there was, was solely therapeutic in aim; no thought had been given to the public health implications. It was known to cleanse the sputum in many cases and to be practical and

cheap but its full significance as a public health measure was not realized. In view of medical thought the gap was wide. Previous to 1930, the indications for collapse were viewed as narrow and centered largely on the unilateral case and a period of sanatorium residence was considered essential for pneumothorax, but there was inadequate accommodation.

The Municipal Tuberculosis Sanitarium of Chicago pioneered a way across the gap, advocated widespread collapse with public health orientation, and instituted large-scale pneumothorax in the field, from the initial injection onward.

Back in Chicago, in 1931, when Dr. Allen J. Hruby and I came to the sanitarium board, the necessity was urgent, even appalling. Faced with a bed shortage which repeated additions failed to meet with any adequacy, with long waiting lists, hundreds of open cases roaming the streets, the solution was collapse therapy or nothing. We knew that in advocating this we were running counter to medical opinion of the day. We had no recourse.

An encouraging experience of mine in the old Tuberculosis Hospital at Dunning helped to tip the scale in favor of widespread pneumothorax in the field: in 1898 working with Dr. John B. Murphy, without x-ray and manometer, treating patients who rode in and rode away on their bicycles, I saw good results from extramural pneumothorax. Why should it not be practical in 1930 managed by an institution with a twelve hundred bed sanatorium as support and a field staff of 42 physicians and 152 nurses? Realizing the impossibility of sanatorium stay for our patients, we instituted large-scale pneumothorax in the field, hooking it up with an accentuated program of collapse at the sanitarium.

This program is still operative. Most patients started in the field remain in the field; patients started in the sanitarium are continued in the extramural clinic. The occasional case who develops serious complications or who needs a thoracoplasty, is sent to the sanitarium. The results over the period 1931 to date are more than satisfying. The program has grown enormously, 76 per cent of the sanitarium patients are under collapse, 1,624 are under treatment in the field, the field results compare favorably with the sanitarium results, and at the time of our last report, published in 1939, 65.9 per cent of the patients who received their initial injection in the clinic were living, as against 71.4 per cent of those who had a preliminary period of sanatorium stay, accidents and complications in the field work are no more common than those for sanatorium procedure.

Our three bulletins, of each of which 14,000 copies have been distributed, has had a weighty influence in the course of collapse therapy in this country and abroad.

The social or public health indication, previously neglected, has been recognized and the preventive possibilities of collapse have had a full measure of appreciation. Many organizations sent representatives to study the plan and modeled from it a program suitable to the home conditions; others used the plan as presented in the bulletin.

In this collapse work, as in all recent activities of the Municipal Tuberculosis Sanitarium, Dr. Allan J. Hruby, my esteemed colleague, who died November 18, 1939, handled all the organization and liaison work. Dr. Hruby was a life-long tuberculosis man, and joined the sanitarium in 1917, shortly after he completed his interneship at Cook County Hospital. Much of the good in the Chicago program of recent years must be credited to him. He established important tuberculosis contacts with Drs. Jirka, Shahan, Blair, Lindberg, Baxter, B. K. Richardson, and other leaders in Illinois, and was a frequent and welcome guest at the state and county meetings. He liked to exchange his viewpoints with other workers, and used to say, "I like to take something down and bring something back."

In addition to the collapse story other influences have been operative throughout the state. School tuberculin testing programs and health surveys have come in for a large share of attention and are being given extensive trial. Use of tuberculin as an epidemiologic index and as a case-finder has, in the opinion of the writer, been overemphasized.

Regarding the survey of the schools, the question may be summarized by saying that this procedure, seconded by x-ray of the positives, is

productive in the small communities. In Chicago tuberculin testing in the schools has not proved adequate when the expenditures involved are considered; during 1936 to 1939, 167,878 children were tested, of whom 27,401 were positive reactors. From among these and their contacts 531 new cases were found.

In comparison with other procedures, the school program is less fruitful. Case-finding directed toward the more advanced age groups should uncover a larger percentage of contagious disease. In a survey of the occupants of the relief shelters, 70 new cases were found in three days. Today the epidemiologist tends to focus on such groups as relief clients, industrial workers, food handlers and residents of the congested areas. We are rapidly approaching the concept of the total x-ray survey as a practical possibility, little explored but bound to loom large in future preventive work. By the total survey I mean the x-ray examination of every individual in an area of high mortality, in a congested block, a congested square mile, a congested 10 square miles.

A recent development which has made the wholesale x-ray a practicable thing, is the miniature x-ray. Abreu, who developed this process, using the 35 mm. film (about one inch square) can take his films for about 1 cent an exposure. The 4 x 5 inch miniatures, which seem to hold more promise, can be had for about 5 cents an exposure. The cost of the x-ray has been cut ten times. These 4 x 5 inch miniatures, taken off a special fluorescent screen by means of a special lens, are excellent and furnish a satisfactory medium for survey; they may even be used for a large share of routine institutional work. Under ideal circumstances and for average purposes, the 4 x 5 inch miniature is almost as satisfactory as the 14 x 17 inch film.

In the state, and indeed in the country, Dr. D. O. N. Lindberg of Decatur is the pioneer in this miniature x-ray work. Over two years ago the writer read of Abreu's work and on January 14, 1938, wrote for further information. The letter was never answered. Dr. Lindberg went to South America, worked with Abreu, and brought back what there was to be known about this new art of fluorography. Though the present interest in the miniatures and the developments along this line stem largely from his efforts, Dr. Lindberg, like many another pioneer, has received little credit.

From the start he was dissatisfied with the inch square film and advocated a 4 x 5 inch. His suggestions were taken up by one of the large industrial firms and fluorographic units are now being turned out. The lens, a 1.5, made of imported glass, is a delicate product requiring time, patience and skill. The units are difficult to obtain. Our institution, early in the field, has been fortunate in securing 2 units just delivered. One of these cameras, attached to a mobile x-ray unit, will soon be put to work in the Negro districts in a total survey.

Another development centers on anti-tuberculosis vaccination. In this America has notably lagged. The consensus of medical opinion throughout the world is favorable to the procedure and the results seem to justify this opinion.

The Municipal Tuberculosis Sanitarium has, for some years, been interested in the subject of immunization. In 1933 we sent a competent representative to the Pasteur Institute, Dr. Sol Roy Rosenthal, who spent six months there, studied the technical and bacteriological problems and brought the cultures back with him. Since that time he has been working in a special laboratory equipped to provide every possible measure of thoroughness and accuracy. For several years the work was limited to experimental animals and Dr. Rosenthal's research fully corroborated the findings of the foreign workers. Using the multiple puncture method, an excellent innovation in technic developed by Dr. Rosenthal, the work has been extended to children. To date, 560 children from tuberculosis homes have been immunized and an equal number from a similar environment are being watched as controls.

The writer believes that in medical opinion this country in the not distant future will swing to the use of BCG. The efficacy of the vaccination has been established and the possibilities are significant.

These possibilities must be evaluated against the extremely high mortality in the Negro and to the pattern of tuberculosis which this mortality implies. Last year in Chicago, in an estimated Negro population of 250,000, there were 704 tuberculosis deaths, in an estimated white

population of 3,300,000 there were 1,139 tuberculosis deaths. The Negro with 7 per cent of the population accounted for 38 per cent of the deaths. The death rates per 100,000 ran 281.7 for the Negro against 34 for the white.

This extreme disproportion is alarming and casts a shadow over the entire tuberculosis program. The causation is apparently multiple. While allowing a due measure of importance to the conclusions of Long, Pinner and others regarding racial susceptibility and genotypic differences, it is necessary to realize the part played by such considerations as rapid urbanization of the Negro, bad housing, congestion, lowered living standards and wages.

In the decade 1910 to 1920, the Negro population of Chicago rose from 44,145 to 110,512, or 150 per cent. Presumably the majority of these Negroes came from comparatively clear areas in the south. They found shelter in already overcrowded and highly infected districts. The crowding of 66,000 ruralites, many undoubtedly tuberculin negative, into a highly infected milieu, must undoubtedly have a very serious influence.

The present tuberculosis mortality in the Negro parallels the European mortality of over a century ago, when the industrial revolution brought hundreds of thousands of rural dwellers to the city. Eventually through resistance and immunity the situation more or less took care of itself. Apparently Darwin's principle prevailed, that the hardy stock survived and that the survival indicated immunity and that this immunity was handed on.

No public health man would suggest waiting a century for the haphazard and partial amelioration of natural selection. Tuberculosis in the Negro must be fought valiantly in the interest of both races. A fresh sand dune, when it tilts beyond a certain angle, flows into the adjacent territory. The same may be said of tuberculosis. In city life when a mortality in any racial group reaches a certain peak it is bound to spill over into the community as a whole.

The whole question of tuberculosis in the Negro is bound up with economic inferiority and this disadvantage must be rectified in some way before we can hope for any gross betterment in the situation. This is fundamental and its practical realization is outside the province of the public health man. The public health man can preach himself hoarse about the relationship between poverty, congestion and disease. The agencies most vociferous in their criticism of the preventive institutions are most lax in their own province—economic and social welfare. While berating the public health man for a high tuberculosis mortality in the Negro, they refuse to make any movement toward amelioration of the causative conditions.

The public health man should attempt to meet the problem of high tuberculosis mortality in the Negro by larger hospital accommodation, total survey in the congested areas, widespread collapse therapy, increased educational activity, and intensive instruction of the Negro physicians in tuberculosis work. That constitutes our present program.

The total survey and the field post-graduate course are innovations of the early months of 1940. The outlook is fairly good. The mortality rate during the last decade has continued the fall initiated in 1918. The rate last year for Chicago was 51.6 against 52.6 per cent for the previous year, a drop of one point. When will we reach the irreducible minimum, the possibilities of which were discussed by Robertson in 1922 when the rate was 77.5 per 100,000, the lowest on record?

In Chicago, with a death rate from tuberculosis of 34 per 100,000 for the white population, have we reached a basal tuberculosis where gross epidemiologic significance is lost and each case must be fought out on individual lines as one plucks the occasional weed in a large garden? Last year there was a decrease of 58 pulmonary deaths in the white, an increase of 45 in the Negro. Will the Negro mortality spill over? Can the spill be prevented?

These are questions that only tomorrow can answer. Prophecy is hazardous. In the century just passed we have seen epochal progress in tuberculosis control and witnessed an amazing decline in the mortality rates. Notwithstanding the unfavorable highlight in the picture, it seems reasonable to suppose that the favorable trends will continue. The last century was a good one for tuberculosis control. One may guess that the next one will be much better.

THE PHYSICIAN AND THE SOCIAL SERVICE AGENCIES

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Most authoritative of all of the documents on organized activities in social work is the Social Work Year Book, published by the Russell Sage Foundation. The issue for 1939 indicates 48 national governmental organizations whose functions are within or closely related to the field of social work; 370 national and international private or voluntary organizations; 512 public state agencies, and 52 private state agencies, including 42 state welfare conferences and 10 statewide organizations for social welfare planning. Thus welfare work in the United States may be said to have advanced far indeed in the past forty years.

No one knows exactly how many professional and amateur social service workers there are in this country but it is reasonable to believe that the number is in the hundreds of thousands, notwithstanding the fact that the membership in the American Association of Social Workers includes only some 11,000 persons. It must be remembered that the social workers are already highly specialized, including the medical social workers, the psychiatric social workers and those primarily interested in such subjects as adult education, behavior problems, child welfare, and similar specialties. No doubt the extensive entrance by the government into social welfare work has created a vast number of new opportunities for employment in this field far beyond anything available previous to 1932.

The National Conference of Social Work was organized in 1874. It now has a membership of 7,000 persons and meets in special sections devoted to social case work, social group work, community organization, social action, and public welfare administration, with a great number of special committees devoted to certain phases of current interest. When the National Conference met in 1938 more than sixty associated organizations met at the same time, including special groups devoted to birth control, social hygiene, clinical psychology, immigration, family welfare, the Indians, the crippled, legal aid, occupational therapy, volunteers in social work, naturalization, travelers' aid, publicity, and the Spanish democracy. One is almost inclined to hazard a definition for modern social work as being "the interest of a group who believe that everybody's business is their business."

Forty years ago there were no schools in which one could be especially educated for the profession of social work. In the early days there were courses given in so-called "schools of philanthropy." Now, however, since the opportunities have so greatly broadened, there are 36 universities and colleges which give degrees in social work—the oldest of them having been founded in 1911. By 1938 they were enrolling 7,404 students annually, which is about one-third as many social work students as there are medical students in the United States.

Private philanthropy has suffered greatly since the government entered more fully into social work and by increased taxation took over from foundations much of their funds derived from investments and, therefore, much of their opportunity to conduct such work. Medicine has always been the pet of philanthropy. Indeed education, medicine and public health derived (in 1938) $19,000,000 out of a total of $34,000,000 spent by 95 foundations.

The social worker has by many been thought to be primarily desirable as an investigator of family income whose duty should be to determine whether or not the person concerned merited public support of aid and whether or not perhaps some assistance in budgeting the family income and in organizing the family might not make independent many persons who are neither sufficiently intelligent nor desirous to care for themselves. With the development of social service as a profession, however, the duties of the social service worker have broadened and medical social work has become perhaps its leading specialty.

Medical social work was established in the Massachusetts General Hospital (Boston) and in Bellevue Hospital (New York City) in 1905. It is now believed that between 500 and 600 hospitals have social work departments, utilizing full-time as well as part-time workers. There are, moreover, 54 agencies which employ medical

social workers, including relief departments, agencies concerned with blindness, schools of social work, state crippled children's programs, and nine miscellaneous agencies. The American Association of Medical Social Workers has a membership of approximately 1600.

Public assistance, by which is meant governmental aid to needy persons living in their own homes, has now broadened tremendously and thus introduced new work for the social service worker. Public assistance cost approximately $2,700,000,000 during the year ending June 30, 1938.

Unquestionably members of the medical profession were primarily responsible for the creation of medical social work and probably have had much to do with the promotion of all social work. The intimate relationship between environment and disease has caused doctors in the past and in the present to wish to be informed concerning the conditions under which patients live. As medicine moved increasingly from the home into the hospital, it became necessary for the doctor to have some agency to investigate conditions within the home. Moreover, follow-up on the patient after leaving the hospital was necessary in order to aid medical evaluation of new methods and new technics. Here, again, the social service worker served a most useful purpose, assisting the medical profession.

In the meantime, moreover, medicine began to delegate many another medical service to associated agencies, including technicians in the field of physical therapy, the clinical laboratory, the x-ray, anesthesia, dietetics, and similar special services. The development of the hospital introduced a vast personnel associated with the functions of such institutions. Thus today there are about 1,250,000 persons who give their full time to the care of the sick, of whom the medical profession represents about 165,000.

It is not at all surprising then that many of these associated agencies should feel a definite responsibility in relationship to the development of medical service, the provision of medical service, and payment therefor. Inasmuch as the dollar that is spent for medical care must be divided among all of the various agencies which contribute service, the cost of social service must be recognized in relationship to the modern cost of medical care.

From a medical-political point of view the big problem that confronts the medical profession is the decision as to who is to be master in the house of medicine. Someone must take responsibility for the sick. In the past all of this responsibility was carried by the physician who made the ultimate determination as to whether or not the patient should be cared for at home or in the hospital, as to the extent to which the auxiliary services were to be employed, and frequently as to the fees that could be charged, and the manner in which they could be paid. With the increasing attention to the scientific aspects of medical service many a physician has seemed to be willing to delegate all functions—except the immediate care of the sick—to outside agencies. By such delegation he has tended to lose his authority and his control in the care of the sick. Thus it is not surprising to see at this time many movements (in many instances led by persons trained in the field of social work) which would make the physician a mere employee in the development and distribution of medical service, placing administration and direction wholly in the hands of the social worker. Indeed, it has been said by leaders in the field of social work that the doctor has no right to concern himself with any other function except the diagnosis and treatment of disease. It will indeed be a sad day for the practice of medicine should this principle be accepted or should the time arrive when the responsibility and authority for the care of the sick are taken from the physician and placed in the hands of administrators whether they be social service workers or efficiency experts.

The one great principle that must be observed in the care of the sick is mutual responsibility between doctor and patient. It is absolutely necessary to the maintenance of the high quality of medical care. It is absolutely necessary to both patient and physician as independent human beings. Unless physicians realize that they are to maintain their authority and that all of the auxiliary professions and trades which have grown up around medicine must be maintained in the position of auxiliary and accessory rather than dominant in this field, the detriment to the quality of medical service will be immeasurable.

A CENTURY OF OBSTETRICS AND GYNECOLOGY

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The history of medicine is a fair gauge of the history of human knowledge: ages of ignorance and superstition; centuries of slow groping in almost complete darkness; gradual enlightenment in scattered centers of learning here and abroad; a tremendous acceleration in the past hundred years, which shows no signs of slowing down.

Intimate study of individual achievements of the past demonstrates clearly that nearly always, the pronouncements of the Immortals are founded on the previous labors of the unknown. Isolated facts and scattered observations, unheralded and apparently lost, suddenly reappear as brilliant discoveries.

Obstetrics, which is a much older specialty than gynecology, is a register of this age-old and curious process that has led to the present level of attainment.

A century ago our own Oliver Wendell Holmes published his powerful argument on "The Contagiousness of Puerperal Fever" in the New England Quarterly Journal of Medicine and Surgery (April 1843).

All the events so often attending a discovery are exemplified in the story of puerperal fever. Charles White pointed out the essential facts and proved his point with an unbelievably low mortality in his "Treatise" of 1773. It availed him nothing. The profession refused to heed and the midwives were not even aware of the issue. A succession of excellent physicians in England and America confirmed White's observations, but puerperal fever retained its hold.

Following Holmes' publication seventy years later, he was roundly denounced by the two leading specialists in the United States, Charles D. Meigs of Jefferson Medical School and Hugh L. Hodge of the University of Pennsylvania. Puerperal fever retained its hold.

In 1847 Ignaz Semmelweis went through an identical experience. His conclusions and technic saved thousands of lives in Vienna. They won for him the abuse of his seniors and eventually a tragic death. By 1865 he and his predecessors in this crusade had been justified. Puerperal fever was losing its hold.

The development of anesthesia which began a century ago, parallels in many respects the growth of understanding of puerperal infection. Crawford Long demonstrated the use of ether in 1842 in Athens, Georgia. William Morton and John Collins Warren formally employed ether in surgery in 1846 in Boston. The following year James Y. Simpson started the use of chloroform in England; the history of that battle is known to all students of medicine. In the end these two anesthetics became established but not until reputations had been assailed and endless bitterness lived down.

In 1854 Marmoduke Burr Wright published a precise technic for cephalic version. This gradually found acceptance but remains one of the debatable measures in obstetrics.

The era of antiseptics began in 1867 with Joseph Lister whose work laid the foundations of modern obstetric and gynecologic technic. Louis Pasteur, whose experiments ranged from work with silkworms in 1865 to the cure of hydrophobia, gave the necessary impetus to the scientific approach to modern surgical technic.

From this decade on, a group of brilliant clinicians added their individual efforts to the development of obstetrics and gynecology. In 1877 Etienne Stephané Tarnier devised the axis traction forceps. In 1876 Edoardo Porro showed how a cesarean section could be carried out under unfavorable circumstances and result in the complete recovery of the parturient minus her uterus. In 1882 C. S. Saenger demonstrated the possibility of abdominal delivery with repair of the uterine incision and complete functional recovery of the patient.

In 1890 William Halsted added enormously to the safety of all surgical procedures by the introduction of sterilized rubber gloves. In 1895 Wilhelm Konrad Roentgen opened an entirely new approach to our medical problems by discovering the selective penetrating power of the x-ray. In obstetrics the x-ray is gradually winning foothold, and its use is receiving the concentrated attention of innumerable clinics. While its diagnostic and prognostic value in obstetrics is still controversial, there can be no question but that it is a valuable adjunct, and its value may increase. Pelvic roentgenography in gynecology is well established and should be available in every well organized clinic.

The furor created by the American pilgrimage of Kroenig and Gauss in 1916 is well remem-

bered. The twilight sleep which they advocated so forcefully for women in labor struck a sympathetic note among all prospective mothers. This campaign to alleviate the pain of childbirth has resulted in the development of numerous technics employing a great variety of medications administered in various ways, none of which is ideal and uniformly applicable. Future trends in this field will undoubtedly progress to better results.

With all of this activity in obstetrics and its branches, little was accomplished in the development and recognition of our other specialty, gynecology, until the pioneer work which J. Marion Sims carried out from 1845 to 1849. This tireless enthusiast, handicapped by illness, left behind him a life's record which truly justifies his designation as "The Father of Modern Gynecology." The Negress, Anarcha, who submitted to Sims' efforts for surgical repair of her huge vesico-vaginal fistula thirty times before he succeeded, is entitled to a modicum of immortality. The life story of Dr. Sims is more fascinating reading than many of the present day best sellers. Indeed, this may be said of the life stories of all those whose names and deeds were mentioned so sketchily in the foregoing.

Thomas Addis Emmet attained major fame for his work in plastic gynecology in the years following 1868. A pupil of Sims, he carried Sims' work to its real completion. He demonstrated the importance of mobilization of the bladder in fistula work and in addition, developed his own technics for plastic gynecology in general.

In 1872 Robert Battey led the procession of ovariotomists. His and their activities, aimed at the alleviation of innumerable menstrual and nervous disorders by the removal of apparently healthy ovaries, constitute a curious chapter in American gynecology. As the decades went by it came to be recognized that the removal of healthy ovaries by the tens of thousands was not the ideal approach to the ailments for which these operations were performed. It did result in a tremendous increase of information about the diseases of the female genitalia and their relation to the psyche of the women so afflicted.

In 1877 Lawson Tait, whose life was one round of controversy with his colleagues, gave us our first understanding of pelvic infection and its complications. He it was who introduced salpingectomy for diseased uterine tubes, a procedure theretofore unheard of.

It should be understood that during the latter part of the nineteenth century there was a free interchange of physicians between the United States, Great Britain and Continental Europe. The huge women's hospitals of Germany, Austria, England, Ireland and Scotland provided a concentration of material and opportunities for clinical study and autopsy far greater than anything of like nature in the United States. As a result our young medical men found it desirable to finish their studies abroad.

A survey of the medical service available in Illinois must begin with an appreciation of the colonization streams into this area. Illinois was set up as a territory in 1809 and was incorporated into the Union in 1818. Its population then was approximately 12,000. Southern Illinois was settled by colonists from Virginia, Kentucky and Pennsylvania. The only medical service available to these people was furnished by the occasional military surgeon or itinerant doctor. After the Indian Wars and removal of the Indians from Illinois in 1832 there was a tremendous influx of colonists into the central and northern parts of the state, mostly from New England and the Middle States. In 1851 the Illinois Central Railroad was given land grants and helped develop the unity of the state. Obstetrics was part of the work of every physician. Specialization was essentially unknown.

Gradually Chicago assumed its important place in the development of the state. In 1878 a small band of pioneers founded the Chicago Gynecological Society. It is fitting that their names should be recorded here: W. H. Byford, De Laskie Miller, A. Reeves Jackson, . T Davis Fitch, E. O. F. Roler, James H. Etheridge, H. Webster Jones; the associate founders were E. C. Dudley, C. Warrington Earle, H. P. Merriman, D. T. Nelson, H. T. Byford, and E. W. Sawyer.

Thereafter Chicago became an active center in the development of obstetrics and gynecology. It was not until 1897 that O. B. Will of Peoria became the first physician from another part of the state to be accepted as a non-resident member of the Chicago Gynecological Society. As a result the development of obstetrics and gynecology as a specialty in Illinois lagged far behind its growth in the Eastern States where there was a

much greater concentration of population, medical centers, hospitals and physicians.

Nevertheless the stalwarts who carried the torch for Chicago and the surrounding country were in no way inferior to the leaders of these twin specialties elsewhere. The work of William H. Byford deserves special mention. He was the first in this area to write a text on gynecology. He was the first to treat inflammatory conditions of the cervix by cauterization. Thomas Watkins who developed the interposition operation independently of and preceding the work of Wertheim was foremost in the ranks of Chicago gynecologists. Simultaneously E. C. Dudley, J. Clarence Webster, L. E. Frankenthal, Fernand Henrotin, Reuben Peterson and Henry Banga were outstanding practitioners of what was indeed a major specialty.

William Wright Jaggard who shot across the horizon of the Chicago Gynecological Society like a meteor, exemplified the internationalism of medicine. His years of training abroad enabled him, a comparative youth, to cross swords successfully with the seniors of Chicago in obstetrics and gynecology. Joseph B. DeLee, pupil of Jaggard, teacher and brilliant obstetrician, has been an inspiration to students and the profession for years.

The work and teachings of men of science is disseminated in two ways. There are those who are gifted but cannot or will not commit themselves to writing and so must instruct by precept and example. There are others, fluent writers, whose thoughts spread far and wide. In this connection it is timely to quote one of the many wise comments of Henry Banga from whom I learned much. In commenting on the contents of medical journals and texts, he who wrote very little himself used to say, "I do not believe everything I read. Let me see the man and his work and then I will know."

The ILLINOIS MEDICAL JOURNAL was founded in 1899. From that date to the present its volumes have contained a total of 367 articles on obstetric and gynecologis topics. Of this number, 195 were obstetric and 172, gynecologic; 224 were written by Chicagoans, 105 by physicians resident elsewhere in the state and 38 were contributions from physicians outside of Illinois. The authors of 136 of these articles were listed as specialists.

It is natural that this material consisted largely of case reports, personal observations and opinions, and reviews of the literature. A survey of these articles indicates that the ILLINOIS MEDICAL JOURNAL is a forum of self-expression for the physicians who are doing such conscientious work in this state. Original discoveries are rare; but all of us should be familiar with the literature of the past, with the controversial problems of the present and the needs of the future. If then, our sincere and earnest practicing physicians develop definite viewpoints or come across cases particularly illustrative of a phase of a current problem, it is imperative that there be an outlet through which they may express themselves. The ILLINOIS MEDICAL JOURNAL ideally serves this purpose.

SURVEY OF ENDOCRINE PROGRESS

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Space prohibits more than a brief mention of the high lights of endocrine progress. A chronologic summary of important events in this field is included at the end of this article. However, that gives but a partial picture of the actual steps in our march along this interesting road. One of the most important events is the change in the profession's thinking on this subject which led to the realization that endocrine disorders occur in all fields of medicine and so concern all clinicians.

Twenty-five years ago the term "endocrinology" was almost one of reproach. Endocrinologists were fellows to be viewed with suspicion. Discussions in scientific journals gave the impression that the endocrine glands were hardly an integral part of the body or subject to the laws governing the rest of the body. Some writers attempted to reduce endocrine diagnosis to an absurdity by showing with mathematical calculations the almost incomprehensible number of endocrine dyscrasias possible by combinations of various glandular aberrations. It was said that glandular preparations, except thyroid, were ineffective when given orally and that their hormones, if any, would be destroyed in the process of desiccation or extraction; consequently therapy was futile and probably harmful. The idea, held by many clinicians, that more than one gland might contribute to a clinical picture was regarded as highly unscientific. Finally the physi-

ologists proved that most clinical syndromes are of pluriglandular origin by showing that these structures are so intimately related that functional abnormality in one is usually reflected in others; and so the uniglandular theory was abandoned.

Curiously, the earliest steps in endocrinology were concerned with those phases which later became the target for harshest criticism. Bordeu, perhaps a hundred years before this society was organized, suggested that the male gonads elaborated an internal secretion. In 1849 Berthold transplanted a cock's testes from their orthodox position to another part of the body and noted that they continued to function in their new location. In 1889 Brown-Séquard, who came to be known as the father of endocrinology, published the results of testicular injection experiments carried out on himself. The report attracted a great deal of attention, more perhaps from the quacks than from the regular profession. From that time until scarcely more than ten years ago the odor of quackery hung about any work with the male gonads.

Less than twenty years ago Stanley's careful and extensive report of his work in San Quentin Prison subjected him to ribald jokes. He transplanted testicles from executed prisoners to others who volunteered for the experiment. They reported such improvement in their general health that the demand for this work exceeded the supply of testes. Stanley noted that this procedure had a favorable influence on the acne of boys and the carbohydrate tolerance of diabetics. This was a decade before the advent of the gonadotropic compounds from the urine and elsewhere, which are reported as helpful in acne, and before the influence of estrogenic preparations on pituitary function was shown to reduce the severity of diabetes resulting from pancreatectomy.

Since the chemists produced the synthetic male sex hormone tolerance for reports of good results following its use in a wide range of conditions has swung to the other extreme. It is alleged to be useful in the treatment of all kinds of male and some female endocrinopathies.

Our interest in the pituitary began with Pierre Marie's description of acromegaly in 1886. Study of the physiology and disorders of this gland proceeded slowly until the early 1920's, when reseach workers discovered one hormone after another so rapidly that at one time 10 or more separate hormones were isolated and their functions charted. Now the physiologists feel that the pituitary body elaborates not more than three hormones. No one questions that it exerts a control over the other endocrine glands as stated by Cushing in 1910.

Parry saw his first cases of exophthalmic goiter before 1825. Moebius placed the responsibility for the syndrome on the thryoid in 1886. Kocher removed the thyroid in 1878. Gull described myxedema in 1873 and in 1895 Magnus-Levy showed that the metabolic rate of such patients could be raised to normal by the administration of desiccated thyroid. In 1914, nearly a century after Parry's observations, Kendall isolated thyroxin. In the early years after its discovery clinicians preferred it to desiccated thyroid for therapeutic purposes, but gradually it became evident that thyroxin did not so completely or easily relieve the symptoms of hypothyroidism as did desiccated thyroid and so now very little thyroxin is being used.

Addison described the syndrome that has since born his name in 1855. He was particularly fortunate in seeing so many cases—he reported 11—because it is a rare disease, though it may have occurred more frequently in his time. Tuberculosis, which was more prevalent then than it is nowadays, is responsible for probably 80 per cent. of the cases. In Illinois about 25 deaths a year are reported as due to Addison's disease.

During the World War Cowie and Beaven and others described lesions occurring in the adrenals in connection with flu, pneumonia, malaria and septic processes. In spite of that the syndrome of hypoadrenia of less severe forms than seen in Addison's disease is regarded with suspicion and its diagnosis questioned.

The clinical symptoms of ovarian insufficiency were charted by careful clinical observers and will stand the test of all time. Their relief by ovarian products has been too often demonstrated clinically to warrant the withdrawal of such preparations from the market as is now being discussed. Only in the past five or six years have we recognized that the most disagreeable vasomotor symptoms of the menopause are not due to ovarian insufficiency but to a disturbance of

pituitary and adrenal function, particularly the latter, consequent upon loss of the ovary's inhibiting influence.

Von Mering and Minkowski discovered almost by accident in 1889 that pancreatectomy was followed by diabetes. The idea that a shortage of pancreatic secretion was responsible persisted and gained followers over the next three decades —followers willing to overlook all evidence pointing to the part other organs might play in this syndrome. When Banting isolated insulin in 1922 he further endeared the pancreatic theory to its followers and even research men paid scant attention to this field for several years.

Houssay and Biasotti showed that pancreatectomy does not cause diabetes if it is preceded by removal of the hypophysis. Hyperglycemia and glycosuria have been noted in connection with other conditions and have cleared up when the underlying causes were corrected. Removal of the thyroid has benefited some cases. Irradiation of the pituitary in acromegaly and basophilism has relieved the diabetic syndrome accompanying these pituitary disorders. Young reported the production of diabetes by injections of pituitary extracts. These events have started the search anew and now there is a more open mind on the subject.

Once an idea or a theory is accepted the presentation of data not in accord with it is resented; except for this trait the cause of diabetes would doubtless have been found and perhaps a cure long before this. For more than forty years any evidence that did not support the pancreatic theory of the disease was rejected. The idea that an organ could be so badly diseased as to cause death and yet present no recognizable lesions while fantastic had no effect in casting doubt on the venerable pancreatic theory.

Endocrine literature is voluminous. The relatively few facts of clinical significance are buried in such a mass of abecedarian contributions that the busy practitioner finds it impossible to separate the significant from the theoretical. A journal is needed that would translate the developments into terms of clinical signficance and condense them into readable space. Available endocrine knowledge of importance to the man in general practice is not widely diffused through the profession.

The Association for the Study of the Internal Secretions was founded in 1916. However, it was only a few years until its annual meetings and its journal "Endocrinology" were largely devoted to work on experimental animals, so that many clinicians who looked to this organization and its publication for help in their studies of this phase of medicine no longer support it. Undoubtedly the progress of endocrinology, or at least the spread of clinical knowledge on the subject throughout the profession has been retarded by the policy of the men who have had charge of the organization's affairs.

The whole story of endocrine progress emphasizes the value of clinical observation. The physiologist has continually proved the correctness of the clinican's observation and the incorrectness of his own ideas. This is not said in a spirit of criticism of the physiologist, but to encourage the clinician to record the things that he sees. The frontiers of medicine and particularly of endocrinology are still restricted. They will be extended as the clinician and the physiologist work together.

Pituitary

1884—A pituitary lesion and an enlarged thymus in acromegaly noted by Edwin Klebs of Königsburg, Prussia in autopsy of a case furnished him by Fritsche of Glarus, Switzerland.

1886—Acromegaly described and named by Pierre Marie.

1894—Tamburini described an hypophysial tumor from a case of acromegaly which he recognized as an adenoma of the chromophile elements of the anterior lobe, and insisted that the fact must be of etiological significance.

1908—An experimental pathological reversion to the Fröhlich syndrome, by partial excision of the anterior pituitary in dogs, produced by Cushing.

1910—Cushing concluded that the pituitary gland exerted a control over practically every other gland in the body.

1912—The relation of the pituitary to diabetes insipidus shown by Cushing and associates.

1912—Benedict and Homans showed that the heat production in dogs diminished after hypophysectomy.

1921—H. M. Evans and J. A. Long of the

University of California demonstrated the growth hormone of the anterior pituitary.

1926—P. E. Smith of Stanford University proved that sex development is inhibited by hypophysectomy, while replacement therapy corrects these results.

1927—P. E. Smith showed that removal of the pituitary produces atrophy of the thyroid.

1927—Oliver Kamm and associates announced the discovery and separation of two hormones contained in pituitrin, namely, pitressin and pitocin.

1930—Houssay and his workers showed that if the pituitary is removed, pancreatectomy does not produce diabetes.

1931—Collip separated "an anterior pituitary-like, gonad-stimulating hormone" from human placenta.

1932—Cushing described pituitary basophilism, a syndrome thought due to hyperfunction of the basophilic cells. Similar syndromes have been reported in connection with tumors of the adrenal cortex and cancer of the thymus.

1937—Young reported production of diabetes in experimental animals by injections of anterior pituitary extracts.

1939—The importance of recognizing in the hyperfunction of the anterior lobe of the hypophysis a diabetogenic agent is stressed by Bartelheimer. According to this author, experiments have confirmed the role of the hypophysis in diabetes mellitus and he points to other authors who state that it, together with the adrenal gland, is responsibe for disturbances in the fat metabolism of diabetic patients.

Thyroid

1825—A posthumous account published of 8 cases of exophthalmic goiter, collected by Parry of Bath from 1786 to 1815. He gave first classical account of the disease.

1835—Robert Graves, a Dublin clinician, published a description of exophthalmic goiter, commenting on exophthalmos and palpitation of the heart.

1840—C. A. Basedow of Merseburg published what the Germans regarded as the first classical description of exophthalmic goiter. The three cardinal symptoms—goiter, exophthalmos and increased heart action—are referred to as "the Merseburg triad."

1873-4—Sir William Gull of Colchester, England, reported his observations of loss of hair, thickening and dryness of the skin, and great loss of mental and physical vigor in several middle-aged women, connecting this picture with atrophy of the thyroid. (This condition was named myxedema by W. M. Ord of London in 1877.)

1878—First therapeutic excision of the thyroid by the Swiss surgeon, Theodor Kocher.

1886—Exophthalmic goiter attributed to hypersecretion of thyroid by the German neurologist, P. J. Möbius of Leipzig.

1893—Friedrich Müller showed that the metabolism of patients having exophthalmic goiter is increased.

1895—Magnus-Levy demonstrated that in Gull's disease (myxedema in adults) metabolism was greatly reduced and treatment with desiccated thyroid raised the metabolic rate to normal or above.

1914—Thyroxin in crystalline form separated from the thyroid by E. C. Kendall.

1917—David Marine of Akron, Ohio, began iodine prophylaxis of goiter in school children.

1934—Marine and his associates were able to produce exophthalmos in thyroidless guinea-pigs by administration of extract of the anterior lobe of the pituitary.

Adrenals

1855—A monograph on disease of the adrenals published by Thomas Addison, describing 11 cases of Addison's disease.

1896—Epinephrine isolated by L. Fraenkel of Breslau.

1897—Abel and Crawford isolated an active substance which Abel later obtained in the form of a benzoyl compound having basic characteristics and gave it the name epinephrin.

1901—The active principle was obtained in crystalline form by Takamine (who patented it as adrenalin) and also by Aldrich.

1904—The chemical formula and constitution of adrenaline determined by Jowett.

1919—Autopsies conducted by D. M. Cowie and P. W. Beaven at University of Michigan, on victims of influenza, revealed hypoplasia of the adrenals and evidence of adrenal dysfunction.

1927—F. A. Hartman and associates at University of Buffalo isolated adrenal cortex extract, which they named "cortin," and which prolonged life in adrenalectomized animals.

1929—Pfiffner and Swingle prepared a potent extract of the adrenal cortex.

1930—Rowntree and Greene announced clinical control of Addison's disease with the cortical hormone prepared by Swingle and Pfiffner.

1937—Prior elaboration of extracts of the adrenal cortex in the treatment of patients suffering from Addison's disease, led to the synthetic preparation of esters of desoxycorticosterone (oxyprogesteron) by Reichstein.

GONADS

1722-76—The first lucid theory as to the internal secretions of the gonads was offered by Bordeu.

1849—A. A. Berthold of Gottingen first demonstrated that the gonads elaborate an internal secretion, by transplanting cocks' testes.

1896—The first serious attempts at ovarian therapy were made at the Landau clinic in Berlin, the preparation being fresh ovarian substance from cow or sow fed to women who had been castrated.

1898—Prenant suggested that the corpus luteum furnishes an internal secretion.

1923—E. A. Doisy, E. Allen and coworkers of St. Louis University standardized activity of folliculin, the ovarian hormone from the liquor folliculi of hog ovaries.

1927—L. C. McGee extracted testis hormone.

1928—Ascheim and Zondek discovered gonad-stimulating hormone in the urine of pregnant women, which led to preparation of active extracts from this source.

1930—E. A. Doisy, S. Thayer and C. D. Veler of St. Louis announced the crystalization of the ovarian hormone from the urine of pregnant women, and named it "theelin."

1931—E. A. Doisy and S. A. Thayer of St. Louis University extracted a second estrogenic substance from the urine of pregnant women, calling it "theelol."

1931—Butenandt obtained crystalline androsterone from male urine.

1934—Ruzicka and his coworkers synthesized product from cholesterol identical in its properties and structural formula to crystalline androsterone obtained by Butenandt from human male urine.

1935—Testosterone, a crystalline product from the testis, developed by Professor Ernst Laqueur and his collaborators in Amsterdam.

1936—Kane reported that in 40 cases of repeated spontaneous abortion, treated with progestin and thyroid, 36 living children were born.

1938—An editorial in Am. J. Obst. & Gynec. *36*: 525, 1938 points out that estrogens are available in pure crystalline form as ketohydroxyestrin (theelin) and trihydroxyestrin (theelol). Administration of theelol by mouth is practical and is usually preferred by the patient. Estrogens are absorbed from the vaginal mucosa.

PANCREAS

1889—Von Mering of Cologne and Oscar Minkowski of Alexoten, Russia, produced experimental diabetes by pancreatectomy.

1922—Banting and Best isolated insulin.

1923—Banting and Best applied for patents for "insulin" in Canada, the United States and Great Britain, and formally tendered the patents to the University of Toronto.

1924—Seale Harris described hyperinsulinism.

1926—Insulin was obtained in crystalline form from highly purified amorphous preparations by Abel and his associates.

1936—In this and the following years slow-acting insulin has been made available.

PARATHYROIDS

1864—Rudolf Virchow observed and briefly described the parathyroids.

1880—The two external parathyroids discovered and described by Ivar Sandstrom, Swedish anatomist.

1892—Successful transplantation of parathyroids to abdominal wall of cat made by A. von Eiselberg of Vienna.

1922—A. M. Hanson of Faribault, Minnesota, isolated parathyroid hormone.

1924—Experiments of Hanson and later work of Collip demonstrated relation of parathyroids to serum calcium concentration and tetany.

1925—The relation of the parathyroids to tetany was proved.

1926—Mandl reported a case of clinical hyperparathyroidism.

THYMUS

1830—Kopp drew attention to fact hyperplastic thymus frequently only pathological condition found in cases of sudden death of infants during attacks of laryngeal stridor, dyspnea, hoarseness, brassy cough and cyanosis.

1934—Using an extract of thymus made by Hanson, Rowntree injected succeeding generations of rats, thereby producing precocity of development.

Function of thymus still not understood.

PINEAL

1898—A teratoma of pineal discovered by L. Heubner in autopsy of a case of precocious sexual and somatic development in a boy of 4½ years.

1936—Using Hanson's extract, Rowntree was able to produce precocious dwarfs.

Despite the observation of precocious sexual and physical development associated with some forms of pineal tumor, the function of this gland is not understood.

LITERATURE AND ORGANIZATION

1855—A monograph on disease of the adrenals published by Thomas Addison, describing 11 cases of Addison's disease. He suggests that adrenals, as well as thyroid, thymus and spleen "in some way or other minister to the elaboration of the blood."

1903—C. E. de M. Sajous of Philadelphia published the first comprehensive treatise on "The Internal Secretions and the Principles of Medicine"; Philadelphia, F. A. Davis Company.

1912—Cushing published "The Pituitary Body and Its Disorders."

1913—Thomas Stephenson of Edinburg (assisted by Henry R. Harrower) published the first entire issue of a periodical devoted to endocrinology, Prescriber, April 1913.

1916—The Association for the Study of the Internal Secretions—the first society for the study of the endocrines—was founded and simultaneously Endocrinology, the first periodical of its type, was inaugurated.

1921—C. E. de M. Sajous held the first chair of Applied Endocrinology founded April 30, 1921 in the University of Pennsylvania.

PROGRESS IN RADIOLOGY

MAXIMILIAN J. HUBENY, M. D., F. A. C. P., F. A. C. R., AND

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The resident who embarks on a course in radiology today, finds on the wall of the well-ordered department of a modern hospital, charts showing kilovoltage, milliamperage, distance and time for each roentgenogram; works under the guidance of a roentgenologist who makes comprehensible the multiplicity of lines and shadows; has at his disposal a library of books which interpret the subject; and can have little conception of the difficulties which beset the exploits of the pioneer radiologist.

About forty-five years ago, when Roentgen discovered "a new kind of ray" the account of its unbelievable properties was received with incredulity. Later, the press ever alert to the subtleties of popular taste, filled the minds of a wondering laity with absurd notions of what was going to happen, once these "wonder rays" were set loose.

Without a notion of how the rays were to be generated, the public got the idea that soon everyone would be surrounded with them, and that all sorts of pocket devices, enabling each man to have a few rays for his own private use, would be on sale; that the rays might spring up from the crevices in the pavement, or pop out from doorways, where prying individuals had secreted themselves to prey upon an unsuspecting populace.

So great was the alarm for a time that in New Jersey an assemblyman introduced a bill "prohibiting the use of x-rays in opera glasses in theaters"; an English firm, fearing for the morals of a nation, advertised a line of women's underwear proof against x-rays.

With this confusion about them, a few physicians set about to understand the new rays, to make practical use of them, to standardize methods of production, and to find out if these rays might on occasion be dangerous.

The men who undertook this quest had no enthusiastic cooperation from those in high places. The conservative and academic element of the profession regarded these experiments warily and repeatedly counseled conservatism and a guarded outlook on the potentialities of anything so nebulous and so little under control as these mysterious rays.

The first demonstrations of the remarkable penetrating power that the rays possessed were stereotyped and consisted usually in photographing some coins in a book, or for an anatomic demonstration a plate was made of the bones of the hand. These plates were not very informative, as compared with those of today, but, was it not almost a miracle to be able to see the bones at all? Soon plates were made of other areas of the body, and the specialty had got off to a start—a halting and hesitant start, that yet demonstrated that x-ray examinations had come to stay.

The present-day intern, accustomed to these films made by exposures of a few seconds, would find unbelievable the procedure necessary in those early days, when even a plate of the hand required one hour's exposure—providing everything went well!

The rays generated then had little current

From the Department of Roentgenology, Cook County Hospital.

volume and were produced with great difficulty. The favorite type of generator was the static machine, which was a part of the table equipment, and was operated by hand. The patient was seated at the table, his hand strapped to the film holder. How else could he hold still so long? The roentgenologist stood beside the table and turned the crank for an hour, and a plate of "bones of the hand" was made—*perhaps!*

A few manufacturers, perhaps fearful of a revolt of the profession against so much labor, put out machines in which batteries replaced the static generator, but were never very reliable as the batteries were apt to run down in the middle of an exposure.

Naturally, the new procedure was early used in trying to determine the presence or absence of pregnancy. Here the difficulties became really formidable. No meager exposure of an hour would do the business now. One man tried it, and not getting much on the plate because of the thickness of the parts to be penetrated, he resolutely made a second attempt, exposing a specially sensitized plate more than an hour. When this was developed, "a faint outline of the trunk of the fetus could be recognized." The fetal head was hidden by the maternal pelvis. Other investigators, trying the same thing, exposed the plate an hour and a half and concluded that the imprint of the fetus on the x-ray plate was a sure sign of fetal death! For though a mother might hold still that long, certainly the fetus could not be induced to do so!

Nor did the skin of patients receiving these long exposures escape unharmed. One physician from a university clinic reported that having "photographed with x-rays" the head of a colleague, the colleague's hair fell out.

Shortened exposure time was receiving pointed interest. The first device of great help was the intensifying screen, which is merely a fluorescent screen, one of which can be placed on each side of the plate or film in the film holder. By the glow which Roentgen rays produce, the action of the emulsion on the film is greatly enhanced and the photographic effect intensified.

The fluoroscope, which suggested the idea for this, was the first device used to demonstrate x-rays, and reached a stage of some perfection earlier than did the making of roentgenograms. The fluoroscope was available to all. The making of plates or films required a great deal of judgment and experience.

Soon after x-rays came into use the fluoroscope underwent a sudden and remarkable improvement through the work of Thomas Alva Edison, who used crystals of calcium tungstate instead of the original barium platino-cyanide. And the screen he developed was about six times brighter than any that had been in use up to that time. Edison was enthusiastic about the clearness of the images one could obtain with this new screen, and considered that roentgenograms could probably be done away with altogether, for he wrote:

"With the fluoroscope, as I have already said, a surgeon should be able to determine in a moment, in case a man has been shot, just where the bullet has lodged, and operate accordingly. There is no reason to take photogrophs, shadowgraphs, or radiographs. I stopped that long ago. You see for yourself, the fluoroscope does the work in a minute."

Edison's enthusiasm was really justifiable in view of the difficulties that attended the making of roentgenograms and the poor results which were often obtained. Now the fluoroscope is never considered comparable with good films for studying detail, but has its own special work, which is to aid in the study of the function of organs. With it one can observe the character of the cardiac behavior, the range of movement of the diaphragm, whether adhesions limit it; the filling and emptying of the duodenal cap, and so on. But the fine alterations in contour and density of structures may escape fluoroscopic observation altogether. When a man gravely pronounces on questions involving the incipient lesions of pulmonary tuberculosis by the fluoroscope alone, with the sort of films which can be made today, one may well question his procedure.

The next advance in the roentgenologist's equipment—a very important advance—was the development of the grid or diaphragm. This was devised by Bucky in Germany and consisted of alternate strips of lead and wood placed very close together, to be interposed between the patient and the film.

For x-rays, to give the maximum sharpness and clearness, should strike the film as nearly as possible in the direction of their incidence. The

reason they would not otherwise do this is that as they pass through the body of the patient they collide with electrons in the atoms of the patient's body tissues; which causes them to shoot out at all sorts of angles, and with all sorts of changed wave lengths. If all of them were to strike the film they would produce a very poor and indistinct image—that is, in those parts of the body which are thick and hard to penetrate.

With the diaphragm in position, no rays which are going at odd angles can pass, for they are filtered out by the parallel strips of lead, and the resulting image is remarkably "cleaned up."

The only drawback to the use of these grids was that the images of the lead strips appeared on the film, and the resulting grating of fine lines sometimes interfered with interpretation.

This difficulty was circumvented in a very ingenious manner. Dr. Hollis E. Potter of Chicago conceived the idea of making the grid move during exposure, so that lines cast by lead strips would be blurred into invisibility. The effect was exactly as had been anticipated. The secondary radiation was removed just as efficiently by the grid, with no trace of the grid's image remaining on the film. This invention was of the greatest importance to all roentgenologists. Without it a great many examinations could not be made and others would give inferior results. Though Dr. Potter's contributions to radiology have been many, if this had been his only one, he would always be remembered for it—the "Potter-Bucky diaphragm."

Tubes underwent revolutionary changes. The first tube, a modified Crookes tube as used by Roentgen, depended for its output of x-rays upon the cathode stream striking the glass walls of the tube. Then came the anode, or focus tube. The cold cathode gas tube utilized the ionization of gas in the tube as a source of electrons and was used until the advent of the Coolidge tube, or hot cathode vacuum tube which was the forerunner of the modern tubes.

The discussion so far has dealt with the use of x-rays in diagnosis. When did physicians begin to use them in treatment?

So far as is known the first treatment of a patient by means of x-rays was given in Chicago, by Dr. Emil Grubbe on January 29, 1896. At the time Dr. Grubbe was suffering from a dermatitis which had come from experimenting with vacuum tubes, of which he was a manufacturer when Roentgen made his discovery. Dr. J. E. Gillman, who treated this deramtitis, sent Dr. Grubbe a patient with carcinoma of the breast, thinking that if the new rays would create such a disturbance in the skin, perhaps they might bring about some change in the growth of the cancer cells. The following day Dr. Grubbe treated a patient for lupus vulgaris.

One of the earliest reports in the literature on the result of x-ray treatment was by Dr. William Allen Pusey, who in 1902 reported on two cases of Hodgkin's disease which he had treated the preceding year. In 1903 Dr. Pusey published, with E. W. Caldwell, a book entitled "The Practical Application of Roentgen Rays in Therapeutics and Diagnosis."

Giving an x-ray treatment then was little like giving one today, for there was no convenient "r" unit for measuring dosage; the output of the tubes was remarkably inconstant, little was understood about the relative penetrability of various wave lengths, and little about depth dosage. Filtration was a virgin field. Dr. George Pfahler made some of the earliest investigations in this subject.

Dr. Pfahler realized that the skin reaction was preventing him from delivering as much radiation at points below the surface as he wished to deliver but the physics of the thing had not yet been brought out. Reasoning logically, he chose the substance most resembling skin to absorb the rays which were damaging the skin, and the first filter was of leather! Today, the specificity of certain metals in absorbing the long, soft rays has been studied, and filters are of metal.

One of the earliest reports on deep therapy came from Dr. Nicholas Senn, in Chicago, who in 1903 published results of the treatment of leukemia by x-rays, demonstrating that the spleen had been decreased in size and the blood picture altered, with marked diminution of the white cells circulating. So far as is known, this was the first time that roentgen therapy was directed at an organ deeply situated, and so deep x-ray therapy may justly be said to have begun with Senn.

There was no standardization of treatment then, and no way to procure it; even if one man knew what sort of exposure would result in an

erythema with his equipment, it was hard for him to hand that information on to another worker, for the tubes varied greatly in output, and kilovoltages showed alarming fluctuations and with many of the installations, when the kilovoltage went up the milliamperage went down. The effect of either of these variations upon the total volume of radiation delivered was not understood. Now, the factors used in the treatment can be set down in a definitive manner, and the actual amount of treatment given can be measured with the "r-meter," so that there is no uncertainty about it, and a patient can be sent from one roentgenologist to another with his treatment record, which will inform anyone exactly what treatment he has had, and how much. We have finally arrived at the "rotentgen prescription" in which we can state that a patient is going to receive "200 r units" of radiation twice a week, and that conveys just as definite an idea as to say that he is going to receive "gr. x" of acetylsalicylic acid at intervals, providing we accompany the statement of "r" units with a basic description of the factors employed.

As apparatus was developed, the hospitals began to consider it a necessary part of their equipment, but some time elapsed before things went smoothly in hospital roentgenographic departments. When asked to go to a hospital to make a special examination, the wise roentgenologist took along an extra tube, since the one in the hospital had probably been rendered useless when various persons pulled switches with more enthusiasm than technical understanding. With the exposure made, the roentgenologist had to take the plates down to his office to develop them, for the hospital usually had no dark room. If the plates did not turn out well enough to be read—with the surgeons, perhaps, waiting to operate—one realized acutely that he had embarked upon a difficult specialty indeed!

The interpretation of those early plates did not proceed as smoothly as is the case today, because all the anatomy had to be worked out, there were no standards of comparison and a lot of it was speculation until enough films had been seen to establish certain lines and shadows as normal.

One of us well remembers an early conference with Dr. P. M. Hickey (whose contributions to radiology need no encomium here), when we came to the joint conclusion that a certain long, dark shadow in the upper thorax, seen in *good* chest films, probably represented the trachea!

The intern of today may think this a far cry, since he is used to hearing people glibly describe minute changes in the arytenoid cartilages, or describe fluoroscopically a lag in a vocal cord. Not that we mention these ultra-refinements in a spirit of unmitigated approbation of their infallibility, either.

In those days everyone had his own notion of interpretation. Our medical and surgical colleagues had a habit of disagreeing sharply with us; but the daily study of films gave us a cumulative knowledge, and above all, a friendly acquaintnace with the normal. If we had to point out that a patient whose neck was in traction only had a cervical spina bifida, the information was not always received with unabated serenity. We could only wait, for we realized that in the beginning we were fondly considered, as Kirklin so aptly put it, as "dignified photographers." We had to put up with it, saying to ourselves, as did Bruckner when they made light of his music —"My time will come!"

The diagnostic work went ahead. Physicians learned all sorts of things about the chest which served to clarify and expedite their diagnoses. Tuberculosis came to be recognized much earlier and entities like lung malignancy began to get some consideration. It is doubtful if, without x-ray films, medical men would ever have had much information about subjects like bronchiectasis.

The chest work went well, but the gastrointestinal work got underway with much difficulty. It was necessary to outline the tract, but it was some time before an opaque meal became routine. In the beginning, the only procedure that suggested itself was to put down an opaque bougie. This showed its own image but gave little information about the esophagus, and was dangerous to some patients. Then tubing loaded with shot was passed into the stomach; bags filled with plumbic acetate were swallowed, and an attempt made to recover them by aspiration; capsules of reduced iron were given.

This was laborious, and gave little information. Then bismuth was tried but only 10 grains were given! It was stated that, in suitable individuals (meaning thin ones), the greater curva-

ture of the stomach could be visualized. About all that was learned was the position of the tract which was considered much more important then than now.

Then came the bismuth meals which gave a bizarre image. Barium mixed with milk was tried, but since milk on reaching the stomach begins to solidify the effect was much as though the patient had had his breakfast before coming for examination. Barium and buttermilk came next, followed by preparations containing a percentage of carbohydrate, which have some nutritive value as well as ability to suspend the barium.

The barium caused trouble too for the first preparations to be used were not always free of sulphide, which is toxic. Nowadays no one need fear barium preparations which are marketed for gastro-intestinal examination.

The gastro-intestinal examination of today is a complete and efficient procedure, with the fluoroscope and serial films each playing its part. They are not regarded as competitive forms of examination. The fluoroscope sometimes gives scanty information in the case of fat patients, but by using a grid in the fluoroscope it may be made to yield more knowledge. One of the postgraduate students at Cook County Hospital remarked, "I can see a deformed bulb, too—when I can see it! I had to come all the way here to find out that my fluoroscope hasn't a grid in it. Now I'm going to buy one, and go back home!"

More difficult to understand is the viewpoint of the individual who fatuously observes, "I can see all right with it, and I can see all right without it." One gathers that the experience of such an individual is limited, or that he has a happy disregard of mucosal relief patterns.

The first explorations into the urologic field had to do with detecting stones. It was soon learned that a large percentage of the stones in the upper tract were calcific or phosphatic, and could be visualized; but in the bladder the calculi were more often composed of urates, and so escaped detection. There were stumbling blocks, here as in gastroenterology, when it came to contrast media. Bismuth, the first that was tried, showed an alarming tendency to stay in the kidney pelves and ureters. After many experiments with silver salts, and others, the present solutions for pyelography were developed.

Contrast media were then being tried in various body cavities. Dr. John Cavanaugh and one of us instilled opaque material into the sphenoidal accessory nasal sinuses. After a considerable trial we abandoned the method, though it has often been revived.

Dental roentgenology virtually put dentistry on a new basis, and cast a new light on the almost universal practice of "treating the nerve." Since that time a great many sufferers have been relieved of various afflictions which devitalization of their teeth, in accordance with the best practices of that day, had brought them.

So many interesting things about the colon were established that our conception of that organ changed materially. It was discovered that a diseased appendix had many interesting roentgen characteristics, and that a typical attack was no longer necessary to convict an appendix of being at the root of much chronic abdominal distress. Diverticulosis of the colon came up for discussion, and in this matter Dr. James T. Case made some outstanding contributions.

In reporting some facts regarding the diaphragm, we were astonished to find how little attention had been paid to this complex and sometimes deceiving structure. A great contribution to knowledge of it came from the work of Dr. E. L. Jenkinson of Chicago.

Roentgenology was becoming a better organized specialty, and societies were formed, though there were few at first to attend their meetings. In Chicago, in the early days, several of us used to meet to compare notes, look at each other's films and discuss procedures, for we felt that we could be mutually helpful in this manner, though we could hardly have a formal meeting with so few members. By inviting certain roentgenologists from nearby cities, we managed to get seven men together every three months. We were off to a start, and later affiliated with the Chicago Medical Society as "The Chicago Roentgen Ray Society."

In 1900 the precursor to the American Roentgen Ray Society was organized. Later that year the society took its present name. Its publication, which finally became The Amercan Journal of Roentgenology and Radium Therapy, had for editors, successively, Preston M. Hickey, James

T. Case, Harry M. Imboden, Arthur C. Christie, and Lawrence Reynolds.

The Radiological Society of North America grew out of the Western Radiologic Society, and its official organ, "Radiology," is now in its twentieth volume. Successive editors were Bundy Allen, A. F. Tyler, M. J. Hubeny, and Leon Menville.

The American College of Radiology was organized in 1923, as an invitational body, and holds annual meetings limited to a dinner and an oration.

The International Congress of Radiology meets every three years in a different county each time. The last meeting was in Chicago, in 1937.

Our meetings are attended by the members of a great many other specialties, for our field is pertinent to almost all of them. The diagnostic aid which radiology renders to orthopedics, for example, would be hard to appraise.

From the delineation of the bones of the hand, the whole study of bone disease had evolved, inseparably bound up with roentgenographic appearances. The greatest service may have been in the diagnosis of bone malignancies. But nutritional disturbances, as rickets and scurvy; congenital syphilis; parathyroid disease; oddities like dyschondroplasia, osteochondro-dystrophy and achondroplasia and mechanical disturbances like spondylolisthesis would all be relegated to the domain of the elusive, without the roentgenogram. Every field has been entered. The otolaryngologist has reduced sinus and mastoid examination to exacting terms. The obstetrician makes abundant use of the information he gains through films.

The science advances, and all sorts of special examinations are undertaken; all sorts of solutions are injected. One should be careful when doing some of the contrast-media examinations involving various organs, with air (which sometimes causes fatalities) but also with some of the special solutions; one should inquire whether a special solution will be excreted, or whether it will remain in the tissues, and if so, what will be its effects?

Some procedures yield much information, and do no harm; others yield a modicum of information and carry grave risks. When shown films which are alike a testimonial to the dexterity and persistence of the investigator, and a happy commentary on the physical hardihood and personal good fortune of the patient, we are tempted to exclaim, "Beautiful! But did you learn enough to compensate that patient for the risk to which you subjected him?" The answer, we suspect, might be ready to hand but unconvincing, as with little Peterkin and his grandfather in Southey's poem:

"But what good came of it at last?"
Quoth little Peterkin.
"Why, that I cannot tell," said he,
"But 'twas a famous victory."

The present so laden with promise and so filled with great expectations, brings the pleasing thought that the young man of today, entering this increasingly useful specialty, may devote his time so much more profitably than could some of us who stormed the first frontiers. If our efforts have aided him, if we have removed from his pathway some of the boulders, bridged over some of the pitfalls, slain a few of the dragons, we are glad. The way is never smooth; the work is never done, but as Goethe reasoned, "one must declare it so when . . . one has done one's best."

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OPHTHALMOLOGY IN ILLINOIS 1840-1940

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The witticism, "Get on—get honor—get honest," with some truth characterizes the progressive stages in the transformation of a primitive community to a center of culture. In 1840, when a preliminary organization of the Illinois State Medical Society was inaugurated, medical conditions in the state were admittedly deplorable.

From the Department of Ophthalmology, Northwestern University Medical School.

Dickens, in his American Notes (1842), described Cairo as a detestable morass. The pioneers found disease an adversary more formidable than nature or the Indians. The settlement maintained itself and multiplied only through the reinforcements of an ever increasing tide of immigration.

I

Get on! Following the Revolution, settlers from the Atlantic seaboard drifted into Illinois, entered in increasing numbers after the War of 1812, and came in hordes when victory in the Black Hawk War forced the Indians west of the Mississippi. The newcomers, almost all descendants of the colonists, poured into Illinois through two great gateways. Through the portal of Chicago came settlers from New York and New England; those from Pennsylvania and the South preferred the southern gateway via the Cumberland Gap, the Ohio and Wabash river valleys. The inhabitants of northern and southern Illinois were separated by a broad belt of uninhabitable marshy bottom-lands. The outstanding diseases of the time were "ophthalmia," pneumonia and malaria. Epidemics of ophthalmia were noted from 1835 (Drake) to 1855 (N. S. Davis). The Illinois Institution for the Education of the Blind was founded in 1849.

Napoleon's campaign in Egypt diffused trachoma through Europe, which crossed the Atlantic and wended westward along the southern path of migration where the warm climate and primitive living conditions favored its spread. Thus originated the trachoma belt of the United States—parts of West Virginia, the Carolinas, Tennessee, Ohio, Indiana, Illinois, Missouri, Oklahoma. Contaminated Indians carried the virus on, and those in the southwestern reservations are now most afflicted. Contrary to popular opinion, trachoma in this country is more of a domestic than an immigrant problem. Of the 60,000 cases extant 25,000 are of Indians and 25,000 of native Americans in the trachoma belt. In Illinois endemic trachoma is confined to the southernmost 17 counties. In 1934 the Governor Horner Trachoma Clinics were inaugurated, thanks to the intercession of Dr. Harry Gradle, the present chief-of-staff of the Illinois Eye and Ear Infirmary. Of an initial appropriation of $10,000 half was derived from the governor's contingent fund for the control of communicable diseases, half donated by the Illinois Society for the Prevention of Blindness. Five trachoma clinics were established approximately 25 miles apart, in Jonesboro, Vienna, Herrin, Eldorado, and Shawneetown; and to these centers a bus service brings patients from 95 neighboring towns. This territory accounts for about 3,500 cases of chronic trachoma, produces 300 new cases annually.

II

Get honor! A century ago the requisites of a medical school were a cadaver, and a few doctors to give didactic lectures. Such education could be given at any crossroads settlement and, with disease rampant, roads poor, and doctors scarce, the country medical school thrived. Before 1837, when Rush Medical College received its charter, some doctors in Quincy, Shawneetown, Galena, Jacksonville and St. Charles taught students with the intention of organizing colleges. The Chicago leaders of medical education, Daniel Brainard and N. S. Davis, themselves graduates of a country medical college at Fairfield, N. Y., so advanced professional teaching standards that the country schools of Illinois, started at St. Charles, Jacksonville and Rock Island, had only an abortive existence.

Modern ophthalmology came into sudden flower in the years 1850 to 1865, like Athena arising full grown from the head of Zeus. The creative genius of Helmholtz, Graefe, Bowman and Donders won for ophthalmology the spotlight of medical and intellectual interest, such as was attained later by bacteriology under Pasteur, Koch, and Lister. Americans flocked to study under Bowman and Critchett in London, under Desmarres and Sichel in Paris, under Donders and Snellen in Holland, under Arlt and Jaeger in Vienna and under the inspired von Grafe in Berlin. Before this period ophthalmology was recognized as but an incidental interest in the routine of general practice. The first course of lectures in ophthalmology was given in America by Henry Williams at Harvard in 1850. In 1855, Elkanah Williams introduced the ophthalmoscope to this country, located in Cincinnati and was the first American to limit his practice exclusively to ophthalmology and otology. Slowly the medical schools established independent departments of ophthalmology and otology—Cincinnati, 1860; Bellevue, 1868;

Rush, 1869; Northwestern, 1870; Harvard, 1871; Pennsylvania, 1872.

At the First International Ophthalmologic Conference held in Brussels in 1857 Dr. Samuel Gross reported that in the interior of the United States eye diseases were neglected or treated by quacks. In Illinois, Chicago was fortunate in attracting two qualified and energetic ophthalmologists, Holmes and Hildreth, both early members of the American Ophthalmological Society organized in 1864, and respectively identified with the beginnings of the Illinois Eye and Ear Infirmary and the Cook County Hospital.

Edward Lorenzo Holmes (1828-1900) was born in Dedham, Mass., graduated from Harvard Medical School in 1854, and interned at Massachusetts General Hospital. After eighteen months study in Paris, Vienna and Berlin, he settled in Chicago and, in May, 1858, with the help of some public spirited citizens, established a one-room eye and ear dispensary, which for some years was largely maintained from his own purse. In July 1864 a two-story wooden building was occupied, and became mostly filled with Civil War soldiers suffering from eye and ear disease—whose care was subsidized by the U. S. Sanitary Commission and the governors of Illinois, Wisconsin and Minnesota. Thereafter the Chicago Eye and Ear Infirmary, as the institu tion was then called, continued to receive state aid. Since the Illinois constitution of 1870 forbade appropriations to other than state owned institutions, the infirmary changed its name to that now held, became a state institution and moved to enlarged quarters at East Pearson St. The Chicago fire destroyed this building, but none of the patients were injured. In 1872 the infirmary was established at its present site, Holmes remaining at its head almost to the close of his life and achieving his twofold purpose of qualifying the infirmary as a charity for the poor and a school for ophthalmology and otology. In 1859 Holmes became lecturer in ophthalmology and otology at Rush and, after the professorship was established, held the chair from 1869 to 1898, when he retired at the age of 70. The eye staff of the infirmary now has 6 attending, 9 associate, 18 adjunct, 14 extramural ophthalmologists, 6 eye residents and 6 eye interns.

The dispensary handles 100,000 cases annually, and its 200 bed hospital cares for 5,000 patients. An orthoptic department with two technicians in charge averages 16 cases daily. The entrance lobby is fittingly decorated with oil portraits of Dr. and Mrs. Holmes.

Joseph Sullivan Hildreth (1832-70) was born in Cohasset, Mass., graduated from the medical school of the University of Pennsylvania in 1856 and went immediately to Europe, studying under Virchow and Desmarres. In June 1862 Hildreth married Mary Elizabeth Howard of Detroit, daughter of Jacob M. Howard, then U. S. Senator from Michigan. By virtue of this powerful family connection he was summoned to Washington, where he established a hospital for the treatment of Civil War soldiers affected with diseases of the eye and ear. In Chicago the city hospital at Wentworth Avenue and 18th Street was commandeered by the government and opened as an army hospital, Oct. 29, 1862. On Aug. 23, 1864, Hildreth was placed in charge, and with his administration the hospital was renamed the Desmarres Hospital, and occupied exclusively by eye and ear army patients. Following the evacuation by the government the hospital was transferred to the jurisdiction of the county, reopening as the Cook County Hospital Jan. 1, 1866. In its reorganization Hildreth was appointed oculist and aurist, an appointment that was forced on the board by the doctor's political friends. According to Lyman, great indignation was felt, as "it was thought that an eye specialist was out of place in a general hospital, and that every good all-round surgeon was quite competent to treat such cases." In 1868 Hildreth became the first lecturer in ophthalmology and otology at the Chicago Medical College, now Northwestern University Medical School. Because of a tendency to disagreeable ostentation, Hildreth was less popular with his colleagues than his professional merit deserved. He died, aged 38, from an overdose of gelsemin taken for the relief of neuralgia.

A later member of the Cook County Hospital staff, and the first ophthalmologist to Michael Reese Hospital, which opened in 1882, was Daniel Sigismund Jacobsen (1837-1894). Born in Copenhagen, he abandoned the study of Hebrew theology to take his Ph.D. in 1856, and M.D. in 1862 from Copenhagen University After the Schleswig-Holstein War, in which he served as military surgeon, he came to Chicago in 1866 and in the spring of 1871 founded a private eye hospital on Wabash Avenue, which was a few

months later consumed in the great fire. In 1881 he received an honorary degree from Rush Medical College, and in 1887 became the first president of the Scandinavian Medical Society, which he had helped organize. William F. Smith, who followed him as ophthalmic surgeon at Cook County Hospital, was in turn succeeded by Boerne Bettman.

After Holmes and Hildreth the responsibility for teaching ophthalmology passed successively to Hotz and Wilder at Rush, and to S. J. Jones, Henry Gradle and Casey Wood at Northwestern In 1882 the College of Physicians and Surgeons, now University of Illinois Medical School, was organized, with Bettman as the first lecturer in ophthalmology. Later he became professor, having been preceded in the chair by John E. Harper, and succeeded by Casey Wood.

Ferdinand Carl Hotz (1843-1908) came to Chicago from Germany in 1869 with the excellent background of Heidelberg, study under Helmholtz and Knapp, and subsequent postgraduate work under Virchow and Graefe. He succeeded Hildreth as oculist and aurist to Cook County Hospital and became associated with Holmes at the Presbyterian Hospital and the Illinois Charitable Eye and Ear Infirmary. A man of original ideas, he is celebrated for contributions to the plastic surgery of the eye, his favorite field.

Samuel Jones Jones (1836-1901) graduated from the medical school of the University of Pennsylvania in 1860. He forthwith enrolled in the naval medical corps to do his part in the Civil War and was on duty with the Minnesota in its memorable engagement with the Merrimac, March 2, 1862. In 1868 he resigned from the service and proceeded to Europe for study in ophthalmology and otology. He returned to Chicago in 1869, and soon established eye and ear departments at St. Lukes Hospital, Mercy Hospital, and the South Side Free Dispensary. He attained great skill as an ophthalmic surgeon, and occupied the chair at Northwestern from 1870 to 1897, was on the staff of the Illinois Charitable Eye and Ear Infirmary from 1874 to 1882, and edited the *Chicago Medical Journal and Examiner* from 1887 to 1892. His office contained two or three reception rooms for different classes of patients. A bachelor, his hobby was horses, and he never proceeded to a lecture or clinic without his carriage and splendid steeds.

Henry Gradle (1855-1911) arrived in Chicago from Germany at the age of 10. He graduated from Chicago Medical College, now part of Northwestern University, in 1874, interned at Mercy Hospital and then devoted three years to study in Europe. As a disciple of Koch he wrote the first work in English on the germ theory of disease. After assuming the chair of ophthalmology and otology at his alma mater which he held from 1895 to 1906, he composed a three-volume text on Diseases of the Nose, Throat and Ear, which was widely used and even translated into Japanese. Because of his intellectual brilliance and small stature, 5 feet, 1 inch, G. Frank Lydston dubbed him "The Little Giant." He was blessed however with a rugged constitution, and for over thirty years walked daily to and from his office—nearly 2 miles. He died at 55, leaving to Crerar Library a large collection of medical books and a fund for the yearly purchase of journals relating to eye, ear, nose and throat.

Boerne Bettman (1856-1906) was born in Cincinnati, graduated from Miami Medical College there in 1877 and became successively assistant to Elkanah Williams of Cincinnati, Herman Knapp of New York and Otto Becker of Heidelberg. After three years in Europe he settled in Chicago in 1881 and received almost immediate recognition as a skilled operator, becoming surgeon to the Illinois Charitable Eye and Ear Infirmary, oculist and aurist to Cook County and Michael Reese Hospitals. He founded the Chicago Ophthalmological and Otological Society, which continued from 1883 to 1889 with Bettman as secretary.

After a lapse of four years, the Chicago Ophthalmological and Otological Society was revived in 1893, the charter members being E. L. Holmes, president; C P. Pinckard, secretary; S J. Jones, F. C. Hotz, Henry Gradle, B. Bettman, C. H. Beard, Casey A. Wood, W. F. Coleman, W. T. Montgomery, E. J. Gardiner, J. E. Colburn, H. M. Starkey, Lyman Ware, F. D. Stannard, Robert Tilley, G. F. Fiske, and W. A. Fisher The field of eye, ear, nose and throat was originally subdivided in teaching, clinic and practice evenly into eye and ear, nose and throat; but about 1900 there came a general realization that ophthalmology was a full time specialty and

that otology belonged logically to the domain of nose and throat. And as a result of this changed viewpoint, the organization became the Chicago Ophthalmological Society in 1903; and the Chicago Laryngological and Climatological Society, founded in 1899, became in 1905 the Chicago Laryngological and Otological Society.

Among this group of opthalmologists, Charles H. Beard (1855-1916) achieved renown as an artist as well as an artistic surgeon, and excelled equally in fundus drawings and plastic surgery. He was born in Kentucky, and Bardstown in that state is named after his earlier ancestors. At age 14 he lost a foot in a threshing accident, and because of this defect he later abandoned general practice for the specialty of ophthalmology and otology. After a residency at the Manhattan Eye and Ear Infirmary and postgraduate work in Europe, he located in Chicago in 1886 and became attached to the Illinois Charitable Eye and Ear Infirmary. In 1910 appeared his well known text on "Ophthalmic Surgery," adorned by his own lucid and beautiful illustrations.

Until 1912 the annual meetings of the Illinois State Medical Society had no special section on eye, ear, nose and throat, but included these subjects in surgery, surgical specialties and obstetrics. The section on ophthalmology of the American Medical Association was organized in 1879, and has chosen as presidents the following Illinoisans: F. C. Hotz (1887), Casey Wood (1898), Frank Allport (1901), William Wilder (1907), Cassius D. Westcott (1918), George F. Suker (1930). The American Academy of Ophthalmology and Otolaryngology, originally the Western Ophthalmological, Otological, Laryngological and Rhinological Association, was formed in 1896 as a protest against the exclusiveness of the eastern dominated national societies, and offered all qualified men the opportunities of scientific fellowship. The men from Illinois who have achieved its presidency are: J. E. Colburn (1899), W. L. Ballenger (1903), Casey Wood (1906), Otto Stein (1909), George F. Suker (1912), Joseph C. Beck (1915), William H. Wilder (1930), Harry Gradle (1938). In 1940, by curious coincidence, the three national ophthalmologic organizations are headed by Illinois ophthalmologists: E. V. L. Brown (American Ophthalmological Society), Frank Brawley (Academy of Ophthalmology and Otolaryngology), Harry Gradle (Ophthalmologic Section, A. M. A.).

III

Get honest! Opportunity smiled on men of education and ideals, but the charlatans and the untrained also flourished. Ostentatious humbugs, traveling in splendid carriages, "white horses with black men," thrived in the small towns; and in Chicago the daily papers carried blatant advertisements on cut-rates for cross eyes. Flagrant political interference in the professional activities of Cook County Hospital finally resulted happily in the civil service control of both attending and resident staff since 1905. By 1910, of 39 medical colleges established in Illinois, many of them fraudulent, 12 still existed. The subsequent trend toward fewer and better medical schools leaves but 5 today, only 1 of which is not approved by the American Medical Association.

In 1915 10 babies became blind from ophthalmia neonatorum in Chicago. This disaster brought about the formation of the Illinois Society for the Prevention of Blindness, a cooperating lay organization, which successfully promoted passage of the law that made prophylactic use of silver nitrate compulsory and required that gonococcal infection of the eye be immediately reported to the local health authorities. The preventative is now supplied free by the State Department of Public Health, and the prompt report of cases and their proper treatment has effectively controlled this source of blindness. The society was also instrumental in introducing sight-saving classes in Chicago and, since 1933, has helped open similar classes in downstate cities, wherever the number of children with sight defects warranted. As an extension of this program a department has been organized in the Illinois School for the Blind at Jacksonville, for the semi-sighted from the smaller communities.

Attuned to the call for domestic post-graduate instruction, the physicians in control of Henrotin Hospital founded the Chicago Policlinic in 1886. Its first professors of ophthalmology were J. E. Colburn and F. C. Hotz, who were later joined by Holmes and Wilder. A schism in 1888 gave rise to the Post-Graduate Medical School of Chicago, with an eye department represented by W. F. Coleman, Casey Wood, Boerne Bettman, Frances Dickinson and C. P. Pinckard. In 1895 the Post-Graduate school split in turn into

a south side and a west side branch. So popular was such tuition that the Chicago Eye, Ear, Nose and Throat College, incorporated by William A. Fisher in 1897, gave instruction to over 3,000 in its first 25 years. With the evolution of teaching standards the polyclinic course is now considered inadequate basic training for prospective specialists. The newer short courses as sponsored by the Illinois Eye and Ear Infirmary and the Cook County Graduate School of Medicine are designed to aid men established in practice to keep abreast of recent advances.

Wilder in 1908, as chairman of the Section on Ophthalmology, A.M.A., urged the profession to clean house: "It should no longer be possible to be called an oculist after a month or six weeks in a post graduate school." How could optometry be successfully challenged when many men with a medical degree were doing poor work in refraction? The problem as to what could be done was repeatedly discussed. Finally, Edward Jackson of Colorado recalled that in England the credentials from the qualifying examinations of the royal colleges are highly prized, and proposed certification by an American Board of Ophthalmology. The idea turned out so well that similar boards for the other specialties have been created since. Up to May 1, 1939, 1,642 of the 7,200 eye physicians in the United States have victoriously passed the board's increasingly stringent requirements. The certificate has been made a basis for recognition by many Illinois hospitals and the Chicago Ophthalmological Society. Of the facilities in Illinois the board approves the post graduate course in eye at Northwestern University and the eye residencies at 7 hospitals: Cook County, Illinois Eye and Ear Infirmary, Passavant, Reese, Presbyterian, Research and Educational, University of Chicago Clinics.

William Hamlin Wilder (1860-1935), who was the secretary of the American Board of Ophthalmology from its inception in 1917 to his death, could trace his family to a Massachusetts pioneer in 1638. Wilder graduated from the University of Cincinnati in 1884 and, after five years in general practice and three years of European study, moved to Chicago in 1891. At his own expense he equipped the first laboratory of eye pathology in Chicago at the Illinois Charitable Eye and Ear Infirmary. He was professor of opthalmology at Rush Medical College from 1907 to 1925, and in 1935 was awarded the Leslie Dana Medal for outstanding work in the conservation of vision. He recognized the injection of typhoid vaccine as one of the most advantageous forms of foreign protein and popularized its use in ophthalmic therapy.

Casey A. Wood (1856-), a foundation fellow of the American College of Surgeons, educated the profession and the public to the grave dangers of methyl alcohol as a beverage and industrial poison. As an editor, he was responsible for a System of Ophthalmic Therapeutics (1909), a System of Ophthalmic Operations (1911), the seventeen-volume American Encyclopedia of Ophthalmology (1914-1920) and, till 1914, the *American Journal of Ophthalmology*. He contributed a superbly illustrated research on his hobby, the fundus oculi of birds (1917), and since his retirement from active practice twenty years ago has published several masterly translations of medieval classics on the eye, from the Latin and Arabian.

Interest in the relation of focal infection to the eye was awakened by Frank Billings' publications in 1916, and further stimulated by the thorough and extensive clinical analyses of Irons and E. V. L. Brown. A fuller understanding of the biochemistry of the lens has been derived from the contributions of Hektoen and the later laboratory work at Northwestern University and the University of Chicago. Further discussion of the achievements in progress are best left to some future survey, but one may predict that "in the record of the years," many men of today are destined for Illinois' roll of honor.

58 E. Washington St.

A SURVEY OF PEDIATRICS DURING THE PAST 100 YEARS

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PART I

Modern pediatrics, like internal medicine, had its inception in the medical renaissance in France at the close of the eighteenth and the beginning of the nineteenth century. It is true that one finds in the pages of the ancient and medieval masters descriptions of infantile and childhood diseases, and also some directions for child hygiene and care; nevertheless the systematic study of the problems of health and disease of young

life parallels the progress of modern clinical medicine.

In the English medical literature we find that Walter Harris (1647-1732) wrote De Morbis Acutis Infantum in 1689. In this book Harris wrote that disease in infancy was due to some acid condition of the body and in some speculative and vague way antedated the acidosis theories of our own time. He also treated convulsions of tetany with calcium, sources of which were crab's eyes, oyster shells, burnt ivory and other animal material. Harris's text was popular, and was translated from Latin into English, French and German; it was the authoritative textbook on diseases of children until the publication of Michael Underwood's "Treatise on the Disorders of Childhood" about 100 years later.

William Cadogan (1711-1797) was an early proponent of preventive care of infants, and he considered bad nursing and bad habits responsible for much ill health and for many deaths of children under 5 years of age.

The first children's out-patient department was established in London by George Armstrong (1767). He wrote several essays on diseases most fatal to infants and later a book on the diseases most incident from birth to puberty. He was one of the early proponents of preventive medicine in young life.

The first edition of "Treatise on the Disorders of Childhood" by Michael Underwood (1737-1820) appeared in London in 1784, and the final edition in 1819. This book was highly esteemed, and survived for 62 years as a guide for medical practitioners. In his preface to the 1789 edition Underwood remarks that, interesting and important to society as is this subject, it has been generally regretted by the best writers that this branch of medicine has remained too much uncultivated; and indeed until late years little more was attempted than to get rid of the wild prejudices and anile[1] prescriptions of the old writers, which too often served only to obscure the true nature of children's diseases.

"It is true, indeed," said Underwood, "some laudable attempts have been made of late years to rescue this important trust from being indiscriminately committed to unskilled hands; but it is still to be lamented that even in this liberal age such attempts have not been attended with all the success they have deserved. It cannot therefore be improper that something further should be advanced on the subject, in the hope of silencing the weak objections hitherto made against procuring the best advice as early as possible."

Underwood urged that the supervision of infants and the treatment of their complaints fall to the share of regular practitioners, "to the utter exclusion of illiterate nurses and empirics. . . In neither of these sentiments do I stand alone. Harris, of whose work Sydenham is thought to have spoken so highly, has said the same things."

As to cutting the frenulum of the tongue, Underwood thought this little operation was often requested when there was no occasion for it. He noted that infants had bled to death following the operation. He spoke of the evil of excessive purging and noted that the persistent use of purgatives, a common practice with many physicians, served to keep up catharsis after the cause had been removed, by creating a continual irritation in the bowels. He advised that opiates be prescribed with caution, especially for infants, and cited a case in which a child remained asleep 36 hours after being given 4 drops of laudanum.

Infantile poliomyelitis was first described by Underwood (1784). (Heine described the deformities of poliomyelitis in 1840, considering the disease as a spinal cord lesion.)

Underwood made an inquiry at the British Lying-In Hospital among mothers to ascertain the number of children born and the number that survived. The following is a brief statement of the investigation:

Several women who had borne

3	children had lost as many as	2
4	children had lost as many as	3
5	children had lost as many as	4
6	children had lost as many as	5
7	children had lost as many as	6
8	children had lost as many as	7
9	children had lost as many as	8
10	children had lost as many as	9
11	children had lost as many as	8 and 10
12	children had lost as many as	10 and 11
14	children had lost as many as	11

And several mothers had lost all the children they bore.[2]

At about the same period Neil Rosen von Rosenstein, a Swedish physician (1706-1773) published a work on the diseases of children which was translated into many languages and was considered the most important work of its kind previous to 1800. His chapter on smallpox was outstanding, and he also wrote on diphtheria, worms and whooping cough and other diseases of childhood.

John Cheyne of Edinburg (1777-1836) con-

tributed several chapters on diseases of children to the literature. Starting with the statement that anatomic investigation is the safest foundation for reasoning on the nature of disease, he wrote on the acute diseases and epidemics, and particularly described laryngeal croup, illustrating it by drawings of dissections. In the preface to his second volume on acute hydrocephalus,[3] he stated that he had written on all the diseases peculiar to the period between weaning and puberty, except chorea, which he would not discuss because he had never witnessed in his own practice an autopsy on a fatal case.

Charles Michel Billard (1800-1832), one of the first of the modern pediatricians of France, was guided by the great founders of pathology. While he mentioned his debt to Morgagni (1682-1771), he was more directly influenced by the teachings of Bichat, Corvisart and Laennec. Billard arrived at his cinical conceptions from careful pathological anatomical studies, and thus made important and fundamental contributions to the knowledge of disease in infants and children.

At about this period Alois Bednar, who was studying the diseases of the newborn at the infant asylum in Vienna, made important studies. His book on "Diseases of the Newborn" (1856) contained material gathered at the Vienna Infant Asylum. Bednar felt that he should furnish much-desired information on the disorders of earliest life from his own experience and observed that the greatest difficulty was in the proper treatment of the diseases of this period. On the basis of pathological investigations, the nature of disease was studied, and in many respects the changes were described and the character of the disease revealed. "In order to arrive at similar results with treatment, it will be necessary," said Bednar, "to study fundamentally the various remedies which are employed. It was Sydenham who wished to treat diseases with specific remedies, but very few were discovered." Bednar suggested that one should study the physical and chemical properties of the various remedies, try these on well persons and note symptoms or reactions, taking care that the symptoms produced were not artificial or the result of the observer's imagination. The tested remedies should be applied to the treatment of the sick, making careful observations as to the exact results obtained in a certain number of cases. Bednar evidently had in mind the principles of pharmacological investigation of drugs and other agents, such as are being studied today in modern laboratories by modern methods. Bednar was one of the first to call attention to a murmur elicited by auscultation over the fontanelles or over the cranial sutures of the young infant.

Johann Peter Frank (1745-1821) was the pioneer in hygiene, sanitation and social medicine of Austria, and his reforms in child welfare constituted the first systematic efforts in preventive medicine.

The English pioneer of pediatrics in the nineteenth century was Charles West (1816-1898). West organized the Great Ormond Street Hospital, and published a textbook on obstetrics, as well as a series of lectures on diseases of children. In the introduction to the latter, he said, "It is not without hesitation that I have determined to add to the already numerous courses of lectures which you are called on to attend in your course of studies in medicine. . . However, children will form at least a portion of your practice, and so serious are their diseases that 1 in 5 dies within the year after birth, and 1 in 3 before the fifth year." This stimulating volume on diseases of children was widely read and translated into many languages. West and Edward Heinrich Henoch (1820-1910) of Berlin became warm friends, and indeed Henoch translated West's book on diseases of children into German (1862).

Henoch stands out as the pioneer of modern pediatrics in Germany. It may be said that he established the first pediatric clinic. He was an excellent teacher and clinician, and many of the early American pediatricians attended his clinics and were inspired by his instruction.

Enough has been mentioned to indicate that pediatrics took on an impetus with the development of pathology in France at the beginning of the ninteenth century, and achieved a fresh momentum with the establishment of more precise methods in the diagnosis of disease.

It is interesting to note that when it was proposed to organize a section for diseases of children as a separate branch of the general medical society at a meeting held in Dresden, Germany, in 1868, the section for internal medicine did not approve of this separation. Many of the internists thought then that pediatrics

should be reserved for the chair of general medicine, and that the teaching and hospital practice of pediatrics should be conducted by internists. These views gradually changed. Ultra-conservatism in educational innovations has not infrequently checked human thought and progress.

In American pediatrics before 1800, we find historical details not unlike those recorded in the development of pediatrics in Europe. Epidemics of measles, scarlet fever, influenza and diphtheria were described in pamphlets and journals. Samuel Bard (1742-1821), among other contributions, wrote an inquiry into the nature, cause and cure of the angina suffocativa or diphtheria (1771). It has been said that Bard's article was among the calmest, wisest and most accurate that had been written on diphtheria. Among early contributions may be mentioned the report of a case of congenital stenosis of the pyloris by Hezekiah Beardsley of New Haven (1784). Beardsley observed practically every clinical feature of hypertrophic stenosis of the pyloris as we know it today.

Benjamin Rush (1745-1813) was a hero of the Revolutionary War and a signer of the Declaration of Independence. His medical writings were numerous and cover a wide range, from a treatise on alcohol to a textbook on insanity, but he is of special interest to pediatricians because of his inquiries into the causes and cure of cholera infantum. For this original contribution Rush deserves great credit. In describing the disease he said, "An emaciation occurs to such a degree that the bones come through the skin. Livid spots, convulsions, a strongly marked Hyppocratic countenance, and a sore mouth generally precede the fatal termination of this disease."

Among the early textbooks on diseases of children is that of William Potts Dewees (1768-1841), a resident of Philadelphia, of Swedish extraction. Like Charles West of London, he was the author of books on obstetrics and diseases of children. Dewees's book was widely circulated among American students.

At about the same period John Eberle (1787-1838) wrote a treatise on diseases and physical education of children in Cincinnati (1834).

Modern pediatrics started in America under the direction of Abraham Jacobi (1830-1919). S. S. Adams says of him, "Jacobi pressed the button which set the pediatric clinic in motion." Jacobi was appointed professor of diseases of children at the New York Medical College in 1860. He taught pediatrics in New York City from 1857 to 1899. With the exception of J. Lewis Smith, who was appointed clinical professor of diseases of children at Bellevue Hospital in 1861, Jacobi was the only one engaged exclusively in pediatric practice at that time. Jacobi gave the first bedside instruction in pediatrics in 1862 and this was the first time in America that clinical medicine in any branch was taught at the bedside; thus Jacobi is credited with being the pioneer in this form of clinical instruction.

After Jacobi resigned his teaching position at the College of Physicians and Surgeons, he was succeeded by L. Emmett Holt (1855-1924), who became a forceful leader and teacher in his branch of medicine and whose influence was felt in many quarters.

The department of childhood medicine, having been established in New York, was gradually taken up in other parts of the country. Boston was one of the early centers to interest itself. Its children's hospital was established in 1869 and was one of the first in this country. Pediatrics was not taught in Harvard Medical School until 1871. A few lectures were given on the eruptive fevers, and from 1873 to 1875 Charles P. Putnam was lecturer on diseases of children. Thomas Morgan Rotch gave the first systematic course in pediatrics in 1879, and in 1882 began teaching at the children's hospital.

In Philadelphia Charles D. Meigs (1792-1869) wrote a book "Observations on Certain Diseases of Young Children." His son, John Forsyth Meigs (1818-1882) taught obstetrics at the University of Pennsylvania, and in 1848 published a book on diseases of children which passed through three editions; the fourth was published in collaboration with William Pepper of Philadelphia. Arthur Meigs (1850-1912), grandson of Charles D. Meigs, published a very important contribution on "Milk Analysis and Infant Feeding."

The first record of systematic instruction in pediatrics in Philadelphia is the appointment of Louis Starr as instructor of diseases of children from 1880 to 1884, and professor of diseases of children from 1884 to 1890, in the University of Pennsylvania. He was succeeded by J. P. C. Griffith, who became clinical professor of

pediatrics at the University of Pennsylvania in 1891, and full professor in 1913.

PART II

I shall now attempt to trace the origin and development of infantile disease and pediatric specialization in Illinois. Before giving an account of the personalities and the institutions concerned in the growth of this department of medicine, it seems proper that we should orient ourselves concerning the primitive medical conditions in the state from the beginning of the nineteenth century, and particularly to the prevailing childhood diseases and public health and sanitary practices which prevailed.

Illinois was admitted to the Union in 1818 during the administration of President Monroe. Laennec had only recently perfected the stethoscope and published his treatise on auscultation. Corvisart had described cardiac insufficiency, and Valentine Mott in New York had successfully ligated the innominate artery.

The Indians were living for the most part along the river banks and in the region of Lake Michigan. The white population of 40,000 scattered throughout the state, regarded disease as a greater menace than attacks by the hostile Indians.

So far as is known, the Indians showed a low birth rate and a high death rate, and obviously their population was not augmented by immigration. The Indians claimed that the English brought smallpox, saying, "They gave us smallpox which made our children die."

The white settlers had a high birth rate and a high death rate, and there was an annual increase due to immigration. The mortality for every age was high, though the infant mortality rate led the way.

The entire region had a reputation for unhealthfulness. Malaria was present everywhere. Daniel Drake in one of his famous sanitary observation tours found autumnal, intermittent and remittent fever everywhere in Illinois. He also described the prevalence of milk sickness in the interior valley during the period from 1830 to 1833, and reported that one could not find a single family in which some member had not had a chill or two. In one village every inhabitant except one negro boy was said to have malaria.

Asiatic cholera broke out in 1832 in Illinois and occurred again in epidemic form from 1848 to 1852. Observers of cholera epidemics report that children of all ages are attacked. Newborn infants and children over 5 are equally susceptible; in fact, it is believed that intra-uterine infection occurs. Children are said to be more frequently attacked than adults.

Smallpox epidemics are reported as early as 1837. Typhoid fever became prevalent about 1857, although it may have occurred before and escaped recognition, because the early physicians found it difficult to differentiate it from malaria. During epidemics the incidence of typhoid and smallpox among children has always been recognized to be very high.

Erysipelas was epidemic in 1843 and 1844. Infantile erysipelas was almost invariably fatal.

Nursing sore mouth affected mothers and sometimes nursing babies; it has been suggested that this was scurvy, though there can be no certainty about the matter, since it may have been some form of infective stomatitis.

Diphtheria was described in Illinois records as early as 1855, though the disease may have occurred earlier without having been fully recognized. In 1797 a band of Virginians were supposed to have been virtually annihilated by an epidemic of diphtheria after moving to Illinois. Apparently there was some question about differentiating diphtheria from carlet fever, especially the so-called putrid sore throat which may have been either scarlet fever or diphtheria. The earliest records of diphtheria mortality in Illinois date from 1860, in which year 70 out of 100,000 population died of the disease; in 1880, 122.9 per 100,000 died, and this seems to have been the peak of the diphtheria death rate.

In 1860 the death rate from scarlet fever was 98.7 per 100,000 population. Since 1886 the scarlet fever death rate has gradually diminished, and in 1926 had dropped to 5.7 per 100,000.[4]

Hirsch, the medical historian, tells us that influenza and pneumonia were epidemic in the Mississippi and Ohio valleys in 1807. In 1816 influenza was again pandemic. Drake reports that influenza prevailed in New Orleans and St. Louis and all intervening towns, and an epidemic of pneumonia was reported in Illinois in 1849.

The diarrheal diseases among infants were very prevalent throughout the state during the

pioneer years, particularly during the summertime. From 1843 to 1877 the death rate of young children equaled or exceeded two-thirds of the total deaths at all ages; this was the rate reported for Chicago, and probably it was not materially different in other portions of the state.

L. H. Corr of Carlinville reported in 1879 that one-half the children born in Illinois died before reaching 5 years of age. Michael Mannheimer constructed the table reproduced below showing the ratio of deaths among children less than 5, to all deaths, from 1843 to 1877; the figures for 1925 have been added:

RATIO OF DEATHS AMONG CHILDREN LESS THAN FIVE, TO ALL DEATHS CHICAGO 1843-1877 AND 1925

1843	28.5	1855	44.5	1867	57.5
1844	41.6	1856	52.7	1868	42.2
1845	40	1857	58.5	1869	54.4
1846	33.3	1858	57.3	1870	62.8
1847	37	1859	56.6	1871	70.7
1848	41.6	1860	55.7	1872	45.2
1849	26.3	1861	54.8	1873	59.3
1850	36.7	1862	55	1874	61
1851	42.7	1863	50.7	1875	61.2
1852	33.9	1864	51.4	1876	57
1853	48.5	1865	52.7	1877	56.2
1854	32.9	1866	48.8	1925	17.8

In the earlier years the summer peaks were higher, but in later years declined, and the winter peaks began to appear, the interpretation being that in the earlier years the children died of the diarrheal diseases in the summer, and later of the respiratory diseases in the winter. Fifty years ago infant mortality in Illinois was twice as high as it is now, due to the general prevalence of disease caused by unsanitary conditions and bad hygiene.

In epidemics of pioneer days there was a scarcity of physicians in some districts and the results were often futile, in spite of their best efforts. The training and equipment of physicians varied throughout the country. At the beginning of the nineteenth century there were only four medical schools in the U. S. Some of the students attended college for two terms of one-half year each, others "read medicine" and received instruction from preceptors, who gave them certificates of instruction which qualified them for practice. It is true that some practitioners came with other immigrants from Great Britain and Central Europe and some journeyed with troops from Britain and France.

Physicians were general practitioners. Specialization was practically unknown. While the treatment of disease was primitive and inadequate, diagnosis was being perfected. Vaccination against smallpox was recognized but not widely practiced. Quinine was used for the treatment of malaria. The pioneer physicians struggled manfully and bravely against various epidemics. Not a few of the medical men fell ill and died from the contagious diseases which they were called on to treat.

It is true that detailed facts about disease prevention by sanitation were unknown; nevertheless, the early practitioners urged drainage of swamps and lowlands and sought to obtain a pure water supply, though in spite of their efforts, the water continued to be infected.

Little was known about the sanitation of milk or the protection of dairy products against infection. Contamination of drinking water from improper drainage and sewage was a constant menace to life and health, and the ever present mosquitoes, thriving in the marshlands, caused malarial infections of adults and chidren alike.

Judging by all recorded observations, sickness among infants and children furnished a large proportion of the doctors' patients. It is probably true that there were many fallacies in diagnosis; difficult dentition, intestinal worms, biliousness and many other attempted diagnoses were made to identify disease where no such disorder existed. Some pioneer physicians, confused and discouraged, went so far as to say that small infants were too young to doctor and that vis medicatrix naturae afforded the safest plan of treatment. Perhaps in many instances this was true, especially in view of the heroic treatment with cathartics, emetics, blisters, leeches and venesection, which were in vogue during this period.

While there was a large incidence of infant morbidity and mortality in Illinois from the time of its earliest settlement by the white man, physicians were not inclined to consider diseases of young life as a special branch of medical practice. Sick children were treated by the general practitioner, and medical instruction in diseases of infancy and childhood, such as it was, was appended for the most part to the chair of obstetrics and in some instances to that of general medicine. Only a few lectures were given, and instruction in diseases of children was not separated from the general medical course. In the medical schools of the early nineteenth century it would not have been possible to widen the cur-

riculum so as to include special branches, because the schools gave short courses of only about six months annually over a period of two years.

A number of conditions lead to a closer study of diseases in child life. Under the growing influence of pathology, knowledge of the nature of childhood disorders came to be based in most instances on absolute information instead of speculative or conjectural assumptions. With the advent of modern bacteriology the cause of some of the infectious diseases was revealed, and shortly thereafter deductions were drawn which afforded rational bases for isolation, quarantine and eventually prevention of these diseases.

Pediatrics is one of the youngest of the special branches of medicine. Before the middle of the nineteenth century, children's hospitals had hardly been organized and children's specialists were practically unknown except in a few isolated instances, where they acted as teachers and specialized to a limited extent. Very soon, however, special pediatric societies were organized, chairs of pediatrics were established in the universities and the study and practice of pediatrics took on a new momentum. The study of anatomy and of physiology, and special pathology of childhood received a new impetus. With the advent of bacteriologic studies the gastrointestinal disturbances of childhood were subjected to the closest scrutiny. Escherich of Austria, Lesage and Tissier of France, Booker and Major Sternberg in America and others investigated the role of bacteria in the production of these diseases.

Much valuable information was derived from these contributions, although the results were not always of positive value; but in scientific investigations negative results are important in establishing ultimate truth. It is a fact that the organisms of typhoid, paratyphoid, dysentery and the pyogenic bacteria may produce specific gastrointestinal infections. However, cases of infantile diarrhea are not always due to infectious causes but may be due to injuries produced by food. Nevertheless, the fact remains that during certain seasons of the year and in certain localities, infectious diarrheas cause widespread disaster with a high mortality among infants.

The development of pediatrics in Illinois occurred about the time when special hospital wards or pavilions were first established for the treatment of childhood diseases, and when special instruction in this branch of medicine was introduced into the medical curriculum.

The first mention of instruction in diseases of children in Chicago is found in a note that M. L. Knapp was professor of obstetrics and the diseases of women and children at Rush Medical College, about 1843. Edward Oscar Fitzland Roler (1833-1907) became professor of diseases of women and children at the Chicago Medical College (now Northwestern University Medical School) in 1868; he conformed to the practice of the day by stressing the obstetric side and teaching the diseases of childhood by delivering a few general lectures. Charles Gilman Smith accepted the professorship of diseases of children at the Women's Medical College in 1870, a position which he occupied for several years. He was a popular general practitioner and enjoyed an enviable social position. George Elias Shipman, a homeopathic physician, was one of the first to give children's diseases a prominent place in his practice; he established at his own expense the Chicago Foundlings Home in 1871. James Suydan Knox was appointed lecturer in obstetrics at Rush Medical College in 1873, adjunct professor of obstetrics and diseases of children in 1882 and full professor of obstetrics and diseases of children in 1888.

It is also to be noted that the Chicago Hospital for Women and Children was founded in 1865 under the leadership of Mary Harris Thompson. This is said to have been one of the earliest children's hospitals in America. The first announcement of the hospital stated that it was to be devoted to the care of women and children of the respectable poor. It accommodated 14 patients and was intended chiefly for widows and orphans of the soldiers of the Civil War. This hospital was later named in honor of its founder, the Mary Thompson Hospital, though it is now again known as the Women's and Children's Hospital.

The County Hospital, organized in 1847, occupied various quarters until the present site at Harrison and Wood streets was selected in 1874. A children's ward was set aside in the hospital about 1885 which was known as Ward 13. The main floor of the ward accommodated the older children, while a sort of balcony or mezzanine

floor was reserved for the infants. This section for infants was not particularly well adapted for their welfare or their hygienic care. Cross infections were of common occurrence and there were other defects in the management, as there probably were in similar wards throughout the world. No special precautions were taken for preventing house infections, for securing the proper milk supply, or for its preparation for infant use. I can personally bear witness to the fact that the infantile mortality in this ward was discouragingly high.

During the summertime conditions in the infants' department were particularly bad. In many instances the little patients were admitted in a condition which we designated as marasmus, usually with severe diarrheas; or if they remained in the hospital long enough, they developed diarrhea and marasmus. I recall a severe hot spell when a number of such infants were in the ward. After visiting the infants, I left town for the week-end, and when I returned in a day or two to make my usual call at the hospital, the head nurse informed me that the heat had been too much for the little babies and they had all died; the ward was empty.[5]

About 1890 a special staff of attending physicians was appointed to conduct this ward, and interns were sent from the middler[6] service for a period of three weeks.

The mortality conditions were not different in infant asylums throughout the world. M. Pfaundler, speaking of European conditions, observed that infants were brought into the front door of the hospital with intestinal disturbances and diarrhea, and made their exit from the rear door, having died from marasmus, respiratory complications or other infections. E. Henoch told his successor, Otto Heubner, when the latter assumed charge of the pediatric clinic at the Charite in Berlin, not to open the infants' ward because it could only lead to grief and disaster. It is only since we have learned the importance of aseptic care of infants, the prevention of cross infections, and proper feeding and hygiene, that a considerable degree of success has been attained in well-conducted institutions.

The Children's Memorial Hospital of Chicago was founded in 1884 by Mrs. Julia F. Porter in memory of her son. Originally, it bore the name "The Morris Porter Hospital" and accommodated 30 patients. In 1903 the hospital was reorganized and rebuilt and the name changed to the Children's Memorial Hospital. Several pavilions have been erected since that date, and the hospital now has a capacity of 265 beds, and a large out-patient department. It also accommodates private patients in the Martha Wilson pavilion.[7]

The Durand Hospital for acute contagious diseases was erected in 1912, founded by Harold and Edith McCormick in memory of their son,[8] to care for infectious diseases, particularly those of childhood. Many important investigations were conducted under the direction of the staff of the John McCormick Institute. Unfortunately, this institution closed after the depression of 1930.

The Children's Department of the Michael Reese Hospital was organized as a small ward in 1890, with 12 beds. Eventually, a new department was built, the Sarah Morris Children's Pavilion, erected adjacent to the hospital, with accommodations for about 125 patients.[9]

At about the same time children's wards were established at St. Luke's, Presbyterian and Mercy Hospitals and other institutions. Ambulatory stations were also established in the various hospitals and medical schools.

In 1902 the Chicago Woman's Club inaugurated a movement to provide Chicago with better facilities for sick children, and in the following year the Milk Commission of Chicago was organized and also the Children's Hospital Society. The Chicago Pediatric Society assisted in carrying on infant welfare work in the summers of 1905 and 1906 under the direction of Frank W. Allin. One feature of this work was the conduct of improvised infant welfare stations in tents erected in the poorer sections of the city, where pediatricians selected by the society gave advice to mothers on the care of babies during the hot weather. The Daily News Sanitarium in Lincoln Park also served during the summertime as a babies' day clinic; patients came in the morning and were sent home in the evening.

In 1911 the Infant Welfare Society was reorganized, and new stations were established to instruct mothers in the care and feeding of infants.

Many factors gradually were effective in saving

infant life, such as the improvement in general sanitation and hygiene, better medical knowledge in prevention and treatment of infantile diseases, and the vigorous efforts of the Chicago Health Department.

Perhaps no single factor was more important than the improvement in purification, particularly the pasteurization, of the milk supply.

With improved pediatric instruction in the medical schools in the last years of the nineteenth century, the medical graduates were better prepared to treat infants and young children than previously. The young instructors aspiring for academic honors in the pediatric field read the writings of Jacobi, J. Lewis Smith, Emmet L. Holt, Henry Dwight Chapin, W. P. Northrup and Henry Koplik of New York; Thomas Morgan Rotch of Boston, and Meigs, Louis Starr and J. P. C. Griffith of Philadelphia. Not a few of America's early teachers of pediatrics, especially in the Midwest, studied with Henoch and Baginsky in Berlin, Wiederhoefer in Vienna, Variot and Marfan in Paris, or Charles West and Thomas Barlow in London. The textbooks of Jacobi, Henoch, West, Meigs and Pepper, and J. Lewis Smith were popular with students and practitioners alike. The Archives of Pediatrics made its appearance in 1886, awakening new interest in the subject.

Courses of instruction in pediatrics were established during the 1880's and 1890's at the leading Chicago medical colleges. Marcus P. Hatfield, who had prepared himself in pediatrics under Henoch, was appointed head of the newly organized department of diseases of children at the old Chicago Medical College of Northwestern University in 1881 and served until 1896. He delivered lectures and held a weekly clinic in the amphitheatre of the medical school; he also wrote a compendium on the diseases of children.

Hatfield was assisted in the department by J. C. Cook and C. A. Storey. It appears that Hatfield received the first appointment as distinct professor of pediatrics in any of the Chicago medical schools, though Frank E. Waxham, a founder of the College of Physicians and Surgeons, now the medical school of the University of Illinois, was appointed professor of diseases of children in 1882. Waxham was one of the first to perform O'Dwyer's operation of intubation in Chicago (1885); he wrote papers on this subject and acquired a considerable skill in the operation.

Walter S. Christopher succeeded Frank E. Waxham and became professor of diseases of children at the University of Illinois in 1892. Christopher was very popular as a practitioner and enjoyed an excellent reputation as a teacher. He was also active in civic affairs, serving as a member of the Chicago Board of Education. Christopher and James E. Smedley published some important studies on the physical growth of school children, and the former made many contributions to the literature of pediatrics. He was attending physician at the Children's Memorial Hospital.

Christopher was a colorful personality and, with the imaginative mind of a scientist, he propounded hypotheses and theories and stimulated investigation. He proposed urinary tests for constitutional disorders which in themselves have not stood the test of time; since his day many important additions have been made to our knowledge of urinary chemistry. After his death at 46, Frank B. Earle was appointed his successor and served for a number of years.

Alfred C. Cotton began his career in pediatrics as instructor in the Children's Department of the Central Free Dispensary of Rush Medical College in 1882. Upon the death of J. Suydan Knox in 1892, pediatrics was separated from the department of obstetrics at Rush, and Cotton was appointed to the chair of pediatrics and became attending pediatrician to the Presbyterian Hospital. He wrote a book on diseases of children, as well as a treatise on anatomy, physiology and hygiene of the developmental period. Cotton was a picturesque figure, tall and erect, with long white locks. He had a telling influence on pediatrics of the Midwest in its formative period; he taught large classes of undergraduates, contacted many interns in the hospitals, and was unusually popular with his colleagues, as well as in the medical organizations throughout the state. Among his corps of instructors and assistants may be mentioned Julia Merrill, W. J. Butler, J. W. Vanderslice, Frank S. Churchill, Charles A. Wade and Frank W. Allin.

Charles Warrington Earle (1845-1893) graduated from the Chicago Medical College (now Northwestern University) in 1870. He was one of the organizers of the Women's Medical College and also of the College of Physicians and

Surgeons, where he was professor of obstetrics. Later he became professor of diseases of children in the Women's Medical College. He wrote many interesting case reports for the medical journals and contributed articles for Keating's Cyclopedia of Diseases of Children and also for the American Textbook of Diseases of Children. He was a member and later president of the American Pediatric Society. Earle, like Christopher, was a diligent and enthusiastic worker. He was regarded as a clinician of unusual merit. He was much beloved by his patients and his colleagues, and was respected for his rugged honesty and for the frank expression of his opinions in medical discussions.

John M. Dodson (1859-1933) was appointed professor of pediatrics at Rush Medical College in 1899. He had served as professor of pediatrics at the Northwestern University Women's Medical College from 1894 to 1897. Dodson was a man of sterling qualities. He was keenly interested in the academic side of medicine. For many years he was dean at Rush Medical College; in this capacity, he was the friend and advisor of students, and the inspiration, direction and friendship given to them can never be adequately stated. His contribution to pediatrics consisted largely in planning courses of study and directing the affairs of the department.

With the beginning of the twentieth century pediatrics was recognized as an established branch of medicine. Undergraduate instruction in medical schools has shown marked improvement in character, and in the planning of the curriculum. Chemical and biological investigation in the science of nutrition and the prevention of disease had progressed at a rapid pace, and pediatrics arrived at a recognized position.

There still may be those who think that pediatrics is not a specialty, or that it should have remained an appendage in the division of medical practice. But the fact remains that child health has improved, infant mortality has diminished in civilized countries, and important data have been accumulated concerning the anatomy, physiology, pathology, immunology, prophylaxis and treatment of childhood disorders.

Towards the close of the nineteenth century there were only a few practicing pediatricians. Their number has increased everywhere, and not a few of them have achieved eminence as investigators, teachers and practitioners. I shall mention none of the latter-day men by name, because it would be impossible to include all who deserve special acknowledgment, and also because it is a question whether it is wise to write contemporary history.

From a consideration of all the data that have been accumulated in the various phases of health maintenance as well as disease of childhood, it seems apparent that the existence of pediatrics as a specialty is justified. It is not my thought to overglorify the pediatrician or the specialty or to point exultingly to the progress of pediatrics during the past five or six decades. I fully realize that the advances in our knowledge of childhood health and disease have kept pace with the advances in general medicine and the fundamental sciences, though pediatricians themselves in the last decade or two have been active contributors in the field of metabolism, in the processes of growth and development, infant hygiene and infectious diseases. There are men, not only in this state but throughout the length and breadth of the land, who have devoted their talents and their energies to the advancement of pediatric knowledge. All honor is due those distinguished personalities who have so effectively applied the basic facts of medical science to the preservation of child life and maintenance of health, and to the relief and prevention of childhood disease.

BIBLIOGRAPHY

1. Anile: feeble-minded.

2. Previously, in *Emile* (1762) Jean Jacques Rousseau pointed out that the rate of infant mortality in France was appalling. Of 31,951 children admitted to the Paris Foundling Asylum between 1771 and 1777, 21,476 (80 per cent) died before completing the first year. At the Dublin Foundling Asylum only 45 survived out of 10,272 (99.6 per cent mortality). Sir Hans Sloan said that the rate of mortality of dry nursed to breast-fed infants was as 3 to 1. In the early nineteenth century Marshall Hall said that 7 in 10 dry nursed children died. Underwood in 1784 recommended boiled cow's milk diluted with barley water and added rice, tapioca and semolina to the semi-solid foods.

3. Acute hydrocephalus was undoubtedly tuberculous meningitis.

4. For most of these data we are indebted to Isaac D. Rawlings' "Rise and Fall of Disease in Illinois."

5. The first staff that I can recall was composed of William J. Butler, Frank S. Churchill, Frank Earle, Gottfried Koehler and Isaac A. Abt.

6. Middler: A member of the "middle class" between juniors and seniors.

7. The attending physicians at various times have been Walter S. Christopher, Frank S. Churchill, Samuel J. Walker, George E. Baxter and Joseph Brennemann, the present incumbent.

8. The attending physicians were Ludvig Hektoen, George H. Weaver, Alice Hamilton and George Ruediger.

9. The original medical staff consisted of Ernest Lackner, Frank Cary and Isaac A. Abt.

THE ILLINOIS MEDICAL JOURNAL

HENRY G. OHLS, M. D.
CHICAGO

With the publication of Vol. 48 of the *Transactions* in 1898 ended one era of the Illinois State Medical Society. By that time 630 pages were required to cover the business of the annual meeting and the medical papers presented. Membership in the Society was about 600 and contained representatives of 37 County Societies, 20 City Societies, Clubs and Associations, and 15 District Societies, some of the latter maintaining their organizations independently of the State Society.

Sentiment favoring publication of a Journal had been expressed from time to time since 1886, and at the annual meeting in 1899 at Cairo, it was proposed to "Journalize the *Transactions*" as the American Medical Association had done in July, 1893, and the Pennsylvania Society in 1897. The principal argument, as presented by Dr. G. N. Kreider, was that, whereas there were about 8,000 regular practitioners in the State, the membership in the State Society during the preceding ten years had increased only about 275. As he stated the proposition: "These figures tell better than any words of mine the snail's pace at which we are advancing. Can we not increase our membership by the hundred instead of by the score?"

President T. J. Pitner of Jacksonville appointed the following Committee on Journalizing the Transactions of the Society: Drs. E. P. Cook, John H. Hollister, C. B. Johnson, Carl E. Black and J. W. Pettit.

This Committee recommended "that the method of publishing the *Transactions* be changed and that the publication be called the 'Journal of the Illinois State Medical Society,' the first issue to appear on July 1, 1899, and thereafter on the first of each month."

The report was referred to the Judicial Council with power to act, and the Council authorized the Following Committee on Publication to journalize the transactions for the ensuing year: E. W. Weis, H. N. Moyer and G. N. Kreider. The first and second volumes were issued as Vol. XLIX (New Series, Vol. 1), of which 1,000 copies were printed, and Vol. 1 (New Series, Vol. 2), with 1,400 copies. For Vol. 2, Dr. E. J. Brown replaced Dr. Moyer on the committee.

Vols. 1-5 (July, 1899-May, 1904) each covered a year; since that date each volume included six months only.

Vols. 3-23 were edited by Dr. Kreider, and Vols. 24-35 (July, 1913-June, 1919) were edited by Dr. Clyde D. Pence with Dr. Henry G. Ohls as Managing Editor. Vols. 36 to date were edited by Dr. Charles J. Whalen with Dr. Ohls as Managing Editor.

Under Dr. Kreider the office of publication was Springfield, where Vols. 1-8 were printed. Vols. 9-23 were printed by the A.M.A. press; and, during the remainder of Dr. Kreider's editorship the edition was shipped by freight to Springfield and mailed there. Since October, 1913, the *Journal* has been printed by Rogers and Hall and their successor, Printing Products Corporation (May, 1921). Chicago was the office of the publication when Dr. Pence was editor. When Dr. Whalen became editor, Dr. J. W. Van Derslice was appointed Secretary of the Publication Committee by the Council. The office of publication remained in Oak Park after the secretaryship was taken over by Harry J. Stewart.

Seventy-six volumes have been published to December, 1939. When a count was made in 1928, it was found that the 52 volumes to December, 1927, contained 30,168 pages, exclusive of advertisements (more than the proverbial four-foot shelf!

Since January, 1923, the editorial section has occupied the first reader position.

As above stated, the primary purpose in establishing the *Journal* was to increase the membership in the State Medical Society. As the first issue was limited to 1,000 copies, the Editorial Committee felt that the copies might become very valuable in the course of time and issued a warning to "preserve the *Journal*."

Under "Correspondence" also, Dr. Carl E. Black approved the *Journal* project, made valuable suggestions as to its contents and arrangement, and proposed further that an active canvass of medical men be made in the State to solicit membership in the Society.

1899—Of the numerous valuable historical contributions appearing in the *Journal*, Vol. 1 (August, 1899) reproduced the list of officers and places of meeting of the State Society from the beginning (1850-1899).

1900—Vol. 2 (June, 1900) contained a fine group photograph of the "Fathers," as follows: L. G. Thompson, Lacon, aged 79; J. T. Stew-

art, Peoria, aged 76; Robert Boal, Lacon, aged 94; N. S. Davis, Chicago, aged 84; F. R. Pitner, Clay City, aged 88 (Fig.).

1901—In June, 1901, also appears a group, "Concilium Judiciale Societatis," 1900-1901, with the following: J. L. Reat, Tuscola; Carl E. Black, Jacksonville; D. W. Graham, Chicago; J. F. Percy, Galesburg; E. P. Cook, Mendota; H. C. Mitchell, Carbondale; O. B. Will, Peoria; L. J. Harvey, Griggsville; W. O. Ensign, Rutland. (Fig.).

That the publicity secured through the *Journal* had an immediate effect on membership is attested in August, 1901, in a report of Dr. E. F. Baker to Morgan County Society: "There is no question in my mind that the new departure of publishing the *Journal* has been in a large measure instrumental in awakening the increased interest that is seen throughout the State in the Illinois State Medical Society. I think it is something every physician of Illinois has reason to feel proud of."

1903—Again, in July, 1903, Dr. Kreider at the annual meeting, said: "The *Journal* has had a steady growth and increased influence, and I believe it is now universally conceded that the *Journal* is a vast improvement on the previously issued annual report volume of transactions. Owing to the anticipated change in the constitution which has been consummated at this meeting by which each member of a local society pays dues through his secretary and thereby obtains the *Journal*, there has been no active canvass of the State for the purpose of increasing our subscription list."

1904—Volume 6 (July, 1904) contained an obituary of Dr. N. S. Davis, "In Memorium Patris Societatorum." The sentiment was better than the Latin title.

Dr. Kreider tendered his resignation as editor in 1904, but, at the request of the Council, consented to resume the responsibility.

The Journal Committee, Drs. Black, Harris and Will, was authorized to use its own judgment during the interim of Council meetings in enhancing the interests of the *Journal*.

1907—In January, 1907, the Council adopted the rules of the A. M. A. Council on Pharmacy and Chemistry in accepting advertisements and exhibits which limited the field and cut down the income from advertisements (Vol. 12).

1908—Volume 14 began the custom of publishing the portrait of the President of the Society (Dr. Pettit, 1908-1909) as a supplement.

Among the controversial subjects that drew the editorial fire at that period was the state of medical education in Illinois; and the Philippics of the editor caused Dr. James A. Egan, Secretary of the State Board of Health, to devote more than one issue of the Bulletin to "rebuttal and avoidance." Indeed, the discussion on education became so voluminous and acrimonious that the House of Delegates refused to publish it (Vol. 24).

1909—Since Dr. Baxter spent six months in Europe in 1909 I have been on the Journal staff: 27 years as managing editor.

1913—In the last report of Dr. Kreider as editor at the annual meeting (1913), he traced the growth of the *Journal* from a pamphlet of 48 pages, without ads and a circulation of 500, to 120 pages of reading matter, 20-30 pages of advertisements and a circulation of 6,100! Since 1901 all expenses of the executive officers had been paid, and an Index of the first 49 years of the Society's Transactions, edited by Dr. Carl E. Black, was published in June, 1913.

1914—An outstanding example of enterprise during the editorship of Dr. Clyde D. Pence was the publication (October, 1914) of the Proceedings of the Alienists and Neurologists of the United States at the July meeting in that year. That issue carried 266 reader pages.

Another feature of the *Journal* of that period was a section, "Auto Sparks and Kicks," which was run in a campaign to increase and diversify the advertisement section. To this end also the rates for advertising space were increased 50 per cent. and the section to 40 pages.

1916—In 1916 the Tri-State District Medical Society held its first meeting at Freeport, and for several years the *Journal* published many papers read at its meetings and its successor's, the Inter-State Post-Graduate Assembly of North America.

1919—In June, 1919, Dr. Charles J. Whalen was elected editor, and Dr. Henry G. Ohls was re-elected Managing Editor. Under the editorship of Dr. Whalen, the *Journal* has become the outstanding champion of the Medical profession in its economic contacts.

1922—Thus, in July, 1922, were collected

some of the subjects that had been subjected to his critical dissection:

1. The Sheppard-Towner Bill.
2. State Medicine.
3. Health Centers.
4. Workmen's Compensation.
5. Group Medicine.
6. Compulsory Health Insurance.
7. The Nurse.
8. Physicians' Fees in Pay Clinics.
9. Indiscriminate Free Clinics.
10. Free Hospitalization.

1923—A year later (July, 1923) the editor's principles had expanded:

Journal opposes:

1. Lay dictation of medical practice, either by legislation, endowment or foundation.
2. State Medicine.
3. Federal Aid.
4. Overtrained Nurse.
5. Compulsory Health Insurance.
6. Workmen's Compensation.
7. Free Hospitalization and Free Clinics.
8. Russian Ideas in American Homes.
9. Sheppard-Towner Act.

Journal favors:

1. Lay education.
2. Cooperation among County Societies.
3. Extending organization among physicians.
4. Faith in future of medicine and the rank and file.
5. Adequate pay for adequate service.
6. America for American ideals of cleanliness, freedom and democracy.
7. Commemoration of 75th anniversary of State Society in 1925.
8. Invasion of public affairs, especially political field, by medical profession.
9. Loyalty to the ideals that have advanced medicine to the front of progressive sciences.

1924—In July, 1924:

1. All persons who attempt to diagnose and treat human ailments shall stand equal before the law.
2. All shall submit to the same license requirements on the point of fundamental or preliminary educational standards.
3. Examination by one board only.
4. State law shall deny license until these principles are complied with.

1926—In July, 1926, the editor credits the Lay Education Committee with the following functions (Report of Dr. H. M. Camp, Secretary):

1. To teach the meaning and necessity of the single standard of medical education.
2. To teach preventive medicine toward which periodical health examinations, medical and dental, is greatest single step.
3. To achieve efficient teamwork in health programs with all interested agencies.
4. To establish scientific medical leadership in all lay movements for health.
5. To hold back State medicine through component societies assuming responsibility for public health.

The unexampled increase in the circulation of the *Journal* and the demand for reprints of the economic editorials indicates that the editorial policies make a wide appeal.

1927—The masterly analysis of the United States Bureau of the Census statistics on infant mortality and maternal mortality (January, 1927, pages 14-24), demonstrating that the States rejecting Sheppard-Towner cooperation had an average lower mortality than the States that accepted the Government grants in 1924, also proved the wisdom of the editorial policy of opposition to that law.

The *Journal* for 1927 also noted the increased activity of the Women's Auxiliary under the presidency of Mrs. G. Henry Mundt, and the appointment of Miss McArthur as Secretary of the Education Committee.

At the Past President's Night, on the initiative of Dr. Camp, the 13 past presidents were presented with diplomas.

1928—This year saw the revival of the American Medical Editors' Association. Through its columns the *Journal* emphasized the service to the doctor of the State and County Society.

1929—The *Journal* condemned:

1. Lay dictation of medicine and pay clinics.
2. Newton Bill.
3. The anti-vivisection bill about to be introduced into the Legislature.
4. Character of the service at the Public Health Institute.
5. Socialized medicine.
6. Personnel of the President's Committee on the Health of children.

Dr. Reed, president of the Chicago Medical Society and treasurer of the Chicago Gynecol-

ogy Society for 25 years, was honored at a dinner.

1930—In this issue the *Journal* pointed out that a federal narcotic dictator and narcotic legislation were not needed.

Dr. Zeuch was the subject of an article on "Doctors who achieved fame," and the appointment of Dr. Cutter as permanent historian was mentioned.

An article by Chesterton on State Medicine denounced the panel system.

1931-32—For the first time the *Journal* used boldface type in its editorial heads.

Protests were made against government dictation, questionable maternity statistics and installment financing.

Chicago was proclaimed world medical center.

1933—In 1933 the death of Dr. Van Derslice occurred and Dr. Stewart became secretary of the Publication Committee of the *Journal.*

1935—This year continued the affirmation of the previous *Journal* that corporations cannot practice medicine and protested lay attacks on the medical profession along economic lines. More than one article emphasized that European ideas of medicine were better not imported.

1937—Health insurance, old age security and New Deal tampering with health were the main topics dealt with by the *Journal.*

The honorarium for Dr. Reed was mentioned.

"Pharmacy in 1859" carried the reader back to the early days of the Society.

1938—This issue noted the House of Delegates: 50-year Club.

1939—Federal action against the A. M. A. was the subject of several articles. The *Journal* continued its campaign against socialized medicine.

As the official organ of the Illinois State Medical Society, the *Journal* has published the proceedings of the annual meetings of the Society, and the addresses and other papers read at the annual sessions, as well as papers read at the meetings of the component societies. In addition, it has been the medium of publication of many papers of exceptional value, contributed by distinguished members of the profession from other states.

For several years the proceedings of the Chicago Ophthalmological and Laryngological Societies were published, but the demand for space in the *Journal* became so great that the publication of these papers was discontinued.

That the *Journal,* in cooperation with the Legislative Committee, has been a factor in controlling legislation affecting the medical profession, is demonstrated at every session of the Legislature.

The *Journal* of July, 1927 contained a summary of the evils against which its editor has crusaded and the causes for which the *Journal* was fighting and is still fighting. Among the evils listed are:

1. Attempts by Congress and State legislatures to dictate therapeutic procedures. Diagnosis, dosage and demand should be regulated by scientific judgment in all its flexibility rather than by inflexible, legislative statute.

2. Attempts by lay organizations and individuals, and by capitalistic foundations to effect arbitrary control and supervision of disease, and of the sick and ailing to the elimination of the physician as an individual, or as a unit in a purely scientific society, such as a city or county or state medical society or its divisional.

3. Attempts at fiat legislation that interfere in any way with the proper practice of medicine.

4. Attempts by politicians, misguided, ignorant or malicious, as the tools of cults, quacks or charlatans, to write upon the statute books of any state, county or city, legislation that will permit any impostor to enter the practice of medicine or in any way to assume care of the sick or ailing.

5. Attempts by corporations to act as intermediaries between physician and patient and thus eliminate the benefits to the patient of a direct contact with the medical advisor.

6. Attempts through various agencies to take from the hands of the family physicians, aided if necessary by a local specialist, the requisite periodic health examination.

7. Attempts to effect an indirect medical service anywhere and in any way through a third party.

8. Attempts to install an over-centralization of medical authority with all the dangers and destructive influences attendant upon such non-American bureaucracy.

9. Attempts to create a federal despotism or

a modified soviet with socialization of medicine the touchstone for this calamity.

The causes which the *Journal* is fighting for:

1. Defense of the medical profession from emotional villification from misguided individuals in the profession and from ignorant individuals of the general public.

2. Protection of the profession from misleading opinions engendered in the public mind through unfair, untruthful, and bombastic newspaper publicity attained on the part of certain members of the profession from time to time.

3. Restoration of the rank and ranks of the family physician, that fundamental factor in the practice of medicine, and that has untortunately suffered temporary displacement through the enthusiastic if not altogether balanced rush for specialization that has, through no precise fault of the doctors themselves, permitted a specious foothold for cults in the chasm between the service of the specialists and the average service afforded by the average modern general practitioners.

4. Realization on the part of both mature doctor, recent graduate and undergraduate student that the general public is demanding increasingly a punctilious service for those comparatively trivial ailments that comprise the bulk of human ailments and that proffer fertile mediums for the increase of charlatanism.

The favorable condition of the medical profession in the matter of law and public estimation in Illinois, as compared with other states where the profession is not so well organized, may be attributed largely to the policies of the *Journal* in cooperation with the excellent work of the various officials and committees of the Illinois State Medical Society.

The ILLINOIS MEDICAL JOURNAL was the first medical publication to carry the propaganda showing the dangers of state dictation and control of medicine. Moreover, the present editor through the columns of the *Journal* was the first doctor in America to call attention to over-centralization of government and to the menace of Compulsory Health Insurance, State Medicine and allied dangers.

The same spirit which led that small group of men gathered in Springfield in June, 1840, to declare that they were willing to place themselves before the public on their true merits without "the protection of legal enactment" to sustain them has been reflected in the pioneer efforts of the Illinois State Medical Society through the *Journal* to foster and maintain the profession as an individual entity in 1940.

THE EDUCATIONAL COMMITTEE ITS ORIGIN AND WORK

JEAN MCARTHUR

CHICAGO

Thirty-two years ago the Illinois State Medical Society considered inaugurating a program of health education for the laity but decided that the time was not ripe. Instead, the Society organized a lecture bureau for county societies similar to the present Scientific Service Committee.

Even a few years prior to the organization of the Lay Educational Committee, a physician who spoke to a lay group on medical subjects was apt to be unkindly criticized. However, professional opinion underwent considerable change, and in 1922 the House of Delegates passed a resolution introduced by Dr. Charles J. Whalen to "go on record as endorsing a broad plan of publicity through pamphlets, addresses and the lay press, any or all, to the end that the public be enlightened on the truths and principles contained in the development, progress and present status of medicine in order to counteract the propaganda of many sects who claimed superiority in methods of healing."

At the September 1922 meeting of the Council a committee was appointed consisting of Doctors Charles J. Whalen, R. R. Ferguson and William D. Chapman. No instructions were given as to how the committee should function, nor were any funds placed at its disposal. It was to be known as the Lay Educational Committee. Its object was to make the doctor and the public better acquainted and to present him in a more favorable light before the public.

During the first year money was collected by voluntary contributions, the average contribution being $10 per member. In this way about $12,000 was collected and at once the committee was besieged by various persons with sundry plans for accomplishing all the objectives at a cost exactly equal to the committee's funds. Most of these were agencies which

wanted to do the work entirely through the press. None of their plans were adopted.

In 1923, Mr. Jaklon was appointed director of this work, and Dr. James H. Hutton was added to the committee. After three months' trial, however, the ideas which he advanced were abandoned as unsatisfactory, largely because of the difficulty in gaining the doctors' interest and cooperation and in interpreting accurately their point of view by turning out news matter of academic interest from a central bureau.

In March 1924, Miss Carrol Keller was employed as a full-time secretary and Dr. James H. Hutton became chairman. The personnel remained unchanged for the first decade of the committee's existence.

By the end of the second year a fairly definite program had been planned and the money voluntarily collected had been exhausted. Since then expenses have been met by regular appropriations, varying from $14,381.53 in the year 1926-27 to $8,351.86 in 1936-37 and $12,000 in 1939-40.

During the early days about one-third of the committee's money and energy was expended in post-graduate education for members of the Illinois State Medical Society. It became evident that the profession needed quite as much educating in some respects as did the laity and so at a meeting in Moline, January, 1927, the name of the committee was changed to the Educational Committee. The Scientific Service Committee was organized as a sub-committee in September, 1926, to supply speakers to county societies on request. It has always been the policy to pay the expenses of the speakers scheduled to address county medical societies.

In March 1927 Miss Jean McArthur came to the committee as the secretary with Doctor R. R. Ferguson serving as chairman, an office he has held the past thirteen years.

The county society has always been regarded by the committee as the sole judge of its activities in any county. The county societies used or failed to use the various facilities as they wished. But every county has used its services.

Cooperating with various lay organizations has been one of the committee's most important contributions to organized medicine. Groups that were formerly suspicious, if not actively antagonistic, have become our friends and perhaps our change of attitude has been as great as has theirs. This change has been brought about by friendly informal talks. The Illinois Federation of Women's Clubs was back of the Illinois State Medical Society in opposing the Sheppard-Towner Bill. They gave their assistance also when the antivivisectionists proposed certain measures before the legislature in 1929.

The Illinois Congress of Parents and Teachers has been given support in the last 13 years in plans and promotion of the Summer Round-Up. The Chicago Board of Health incorporated the reports of the Educational Committee in compiling statistics to be entered in the annual city health contest sponsored by the United States Chamber of Commerce. The committee contributed to the Maternal Hygiene Exhibit sponsored by the Medical Dental and Allied Science Women at A Century of Progress, this exhibit was later given to the Rosenwald Industrial Museum of Chicago where it is on display.

A series of lectures was given before groups of 200 to 400 men and boys in the various transient homes of the Cook County Service Bureau in connection with the Illinois Emergency Relief in 1934. The committee cooperated with the Chicago Woman's Club in its special cancer and hay fever projects. In 1937, the Chicago Rotary Club and the Chicago Chamber of Commerce carried on an experiment in vocational guidance for a selected group of 50 young men of the North Park College. Panel discussions were held by prominent manufacturers, the bar association, retail merchants and others. Through the Educational Committee the Society was invited to present a discussion on "Vocational Outlook for Youth In Medicine." The program was followed by a tour of Cook County Hospital. It was a huge success.

The committee has worked with the home bureau units of the state, with the Illinois State Nurses Association, the American Red Cross, the W.P.A., the American Legion and its auxiliaries and scores of other groups covering the entire state.

When the Committee was first appointed a great many organizations were doing some type of health work. There was no coordination and

consequently there was considerable overlapping. This body has helped to bring some order into this field so that there is now less duplication of service.

Wherever a lay group has desired to undertake any health activity, we have sought to place them in touch with the officers and members of the local county society with the idea first, of avoiding friction and second, of keeping these activities in proper and useful channels. If a request is made by any organization for cooperation, the approbation of the local county medical society must be obtained before the committee feels free to act. It functions as a liaison medium between the medical profession and the public.

During the life of the committee there has been a notable reduction in infant mortality in Illinois. The reduction has been greater in Illinois which did not accept Sheppard-Towner money, than in neighboring states which did accept this money.

The work of the committee may be classified under six distinct headings, Speakers Bureau, Radio, Press Material, General Health Education Service, Cooperating Organizations, Scientific Service Committee.

The Speakers' Bureau has been widely used in all sections of the state. Starting in a small way, the committee is now able through the fine cooperation of members of the Illinois State Medical Society, to schedule as many as 600 appointments a year. All speaking appointments before lay audiences are filled by members of the Illinois State Medical Society. Special programs have been arranged to celebrate American Education Week, Health Week, Youth Week. Many talks have been given on state medicine. Speakers have participated in forums and in debates on the subject.

During the two years of the Century of Progress, the committee was responsible for daily health lectures in the Hall of Science. Mr. Rufus Dawes sent the following message, "The almost daily public lectures by members of the Chicago Medical Society have been a valuable support to the policy of the Century of Progress to give sound information upon medical topics to its visitors." Thousands and thousands of people heard these illustrated popular health talks.

The year 1935 brought to a prominent place the subject of vivisection. The committee endeavored to lend its support to the medical scientists in presenting true information concerning the laboratories and the results of animal experimentation. Through the committee it was possible to arrange programs, with speakers from the medical schools, for many types of organizations and schools. The committee also devoted radio time to the discussion of vivisection.

Marshall Field & Company of Chicago wished to hold a series of programs during 1932 Baby Week and the Educational Committee was called on to schedule the obstetricians and the pediatricians who talked on all phases of maternal and child health. The Chicago Herald and Examiner sponsored a series of four programs on child health in the Civic Opera House and the committee furnished the speakers and all of the material for four special Sunday magazine sections devoted to child health.

The number of requests for speakers has increased from less than 100 a year in the first few years to 595 in 1935, 498 in 1939 and over 500 in 1940.

Package libraries are supplied to any physician who wishes to help in preparing these popular talks. The committee maintains this service and during the past six years has compiled more than 100 subjects and collected material in all fields of medicine which can be placed in package library form when requested. In 1935 12 special folders were compiled for a medical officer of the American Legion who was planning brief talks on timely health topics for monthly meetings at the various posts. In 1936 400 packages of material on state medicine were sent to individuals on request and in March of that year all remaining material on the subject was put in package libraries and sent to 132 public libraries in the state.

The radio has been another chief avenue for health education of the public. When Miss McArthur took up her work with the organization in 1927 a few scattered programs were being given over Chicago stations. She contacted WGN and secured a regular period every Tuesday. These programs have been given

every week, except during the summer, over WGN since March 1927. Station WJJD has been used continuously since 1929, WAAF since 1930; and a series of programs has been given over WLS, KYW, WENR, WGES in Lithuanian; WBBM has been used the past two years, and two programs a week have been sent over station WHIP since November 1939. The Chicago Pediatric Society cooperated with the Educational Committee in giving daily child health talks over station WJJD during 1931 and 1932. In 1932, 522 talks were given over Chicago stations. The committee has never paid one cent for radio time. The committee is now responsible for about 300 programs a year over Chicago stations. After being broadcast, copies of the talks are sent to county medical societies to be given locally by members of the respective societies. All papers given over the radio are censored by at least two members of the Educational Committee. Subjects on which there is a material difference of opinion in the profession are not discussed. Treatment is left out except in the most general terms. Speakers do not exploit themselves. The programs have been in the form of talks, round table discussions, dialogues, and questions and answers. Subjects have been seasonal whenever possible. The Educational Committee of the Illinois State Medical Society probably has more time given it by radio stations than any other organization in Illinois.

The purpose of the press service has been to supply timely material on existing health conditions and to furnish editors with announcements of medical meetings and events. The work was begun in a small way and has increased to an almost full time effort. In 1924-25, 14 newspapers of the state used the health column sent out by the Educational Committee. In 1939-40, 250 newspapers used the regular daily or weekly health column, in some instances over the authority of the local county medical society.

The Chicago Herald and Examiner in the fall and winter of 1927 cooperated with the committee on a series of 60 articles on "A Brief History of the Chicago Medical Society," "Progress in Medical Education," "Progress of Orthopedic Surgery," "The Endocrines" and many phases of medicine and surgery.

Thousands of releases announcing meetings of county societies have been sent to newspapers in Illinois, Indiana and Iowa. Special announcements of all meetings of the Chicago Medical Society and its branches have been sent to newspapers. Editors have been glad to receive notices of medical meetings and special scientific events. During legislative years editors have requested information on certain bills introduced concerning the practice of medicine in the state and were referred to the Legislative Committee for reply.

During 1928 8,500 articles were released; in 1939 the number was 15,688.

The secretaries of many county societies using this office for publicity of their monthly meetings have found that this newspaper publicity has increased attendance and built confidence in organized medicine.

In July 1936, the manager of Marshall Field & Company Annex Building offered to give the use of one display window on the first floor for presenting displays of value in lay health education. The window has been used almost four years with exhibits changed monthly, on such subjects as Fourth of July Accidents, Accidents in the Home, Foot Disorders, Cancer, History of Surgery and Anesthesia, The Heart, Bronchoscopy, Hay Fever, Hunting Hazards, Immunization, Popular Medical Fallacies, The Story of Circulation.

Exhibits have been arranged for county and branch medical societies in connection with special community demonstrations, annual meetings of the Illinois Federation of Women's Clubs, the Illinois Congress of Parents and Teachers, Marshall Field & Co., Y.M.C.A.'s, annual meetings of the Association of Physical Education Directors, Chicago and American Dental Societies, the American Medical Association.

The Illinois State Department of Public Health has enjoyed friendly relations with the Illinois State Medical Society through the Educational Committee. Its divisions have sought and received cooperation and in turn have assisted the committee. In 1929 the committee with the aid of several obstetricians revised the pre-natal letters used by the Child Hygiene Division, and later cooperated with a group of obstetricians and the Chicago Pedi-

atric Society in preparing the Baby Book used by that division. The committee has been represented on various advisory committees to departments of the State Department of Public Health.

When a pneumonia control program was inaugurated in 1938, the Educational Committee assisted in securing speakers for scientific programs on pneumonia and its treatment and in 1940 distributed the Pneumonia Handbook published by the state department of health.

Close cooperation in the program on obstetrics and pediatrics inaugurated by the state health department has existed since the beginning. Many programs on maternal welfare have been encouraged before women's clubs, study groups, parent teacher associations, home bureau units and American Legion Auxiliaries. Articles on the importance of care of the expectant mother have been released to newspapers, libraries and study clubs. Radio talks have been given on the importance of prenatal and postnatal care. Programs on obstetrics and pediatrics were prepared for county medical societies and given in all sections of Illinois. Through the office of the Educational Committee contacts with officers of county societies were made for the field representative of the maternal welfare program of the state department of health.

During 1938, 81 obstetric papers and 70 pediatric papers were arranged for county medical societies through this office. Thousands of notices were sent to doctors. Hundreds of announcements of the meetings were sent to Illinois newspapers.

At the 1937 annual meeting in Springfield, a Hall of Health was sponsored by the Illinois State Medical Society, and the Educational Committee assisted in securing the exhibitors, in writing the hand book and in giving publicity. A similar Hall of Health was held at the annual meeting in 1939 and another will be held in 1940. The 1939 Hall of Health was a great success. In connection with it essay and poster contests were sponsored in the high schools with suitable awards. Number of exhibitors and popular interest have increased each year.

In an endeavor to spread its services over a wider field, the committee wrote librarians in March 1933, to ascertain whether they wished to have the short articles prepared for newspapers, to post on their bulletin boards and for pamphlet files. The response was gratifying and during the seven years since that time the number of libraries receiving the material every two weeks has grown from 44 to 115 covering all counties of the state. In March 1933, the committee also began to compile a mailing list of interested individuals who might be able to make use of the articles. This list has grown to more than 1,500 with new requests coming every month from health leaders in various fields. Following each annual meeting, the committee has sent out reprints of the President's address. It has also released reprints of articles on the dangers of socialized medicine. Everything which the committee felt would be of interest to the layman has been included in order to give him a better picture of the health program carried on in the United States. During 1939, 41,069 pieces of literature were sent to the mailing list.

During the existence of the committee its work has constantly increased as the public has become conscious of the fact that the Illinois State Medical Society maintains an office to serve them, and as medical societies realize that the committee, which they support, can help them in making contacts and in promoting county medical organization. There is probably no well organized lay group in Illinois that has not used the services of the committee. The funds spent have paid fine dividends by building good will between the profession and the public.

In this survey it is fitting that the Scientific Service Committee be given a prominent place. This committee was authorized by the Council at its meeting in September 1926 to function as a sub-committee of the Educational Committee. The work was to be done by the Educational Committee and all expenses paid from that appropriation. Its function was to make available to county societies, scientific men and material whenever the Society wished it.

The first step was the collection of material on medical, surgical and special subjects believed to be of special interest to the average doctor, or that touched the problems that brought the medical profession into close con-

tact with the public and were most apt to place the profession in an unfavorable light in the public eye.

A speakers' bureau was inaugurated and an attempt made to enlist the cooperation of able men all over the state. The number of speakers has grown from less than 200 to more than 400, representing all sections of the state, medical faculties, men in general practice with wide experience. During the first year 67 speakers were supplied to 44 county societies. In 1939, 74 groups had 334 speakers and in 1940, 90 medical organizations had 363 speakers supplied by the Scientific Service Committee.

Cooperation has been given several county societies in promoting local clinics for crippled children. Pathological conferences, heart and skin clinics were arranged for a number of counties for their regular meetings. In 1933 the Illinois Branch of the Academy of Pediatrics assisted the Scientific Service Committee in sponsoring 11 pediatric all day conferences in different sections of the state. They were outstanding.

This committee was responsible for scheduling hundreds of obstetricians and pediatricians during the last three years for special programs and in promoting interest in holding meetings to discuss pneumonia. Whenever new fields of treatment have been accepted, the Scientific Service Committee has been ready to offer excellent facilities to counties for suitable programs.

In 1931 conferences were held by the committee with prominent obstetricians of the state and with the neurologists and psychiatrists in an effort to arouse interest among the county societies in these two fields of medicine. Two conferences were held with representatives of Chicago newspapers to foster better understanding between the press and the profession.

Each year the committee has published a list of speakers and subjects from which county societies might select programs. In 1939 a new form was adopted classifying the subjects in all fields of medicine with names of men prepared to speak on those topics. This list gives more than 400 names from which a secretary may choose.

Speakers have been furnished weekly to some county societies, monthly to others, and occasionally to the remainder. For four years the committee scheduled monthly programs for a large county medical society of Iowa.

Frequent letters to county society secretaries and presidents have kept them informed of everything new the committee had to offer.

The House of Delegates at its 1939 meeting appointed a special committee to study postgraduate education and to make recommendations at the 1940 meeting. This committee held meetings with representatives of the Council, with the deans of the medical schools of Illinois, Iowa and Missouri, and with representatives of the State Department of Public Health to discuss what had been done in Illinois and to make plans for future activities. As the result of these conferences, this special committee together with the Scientific Service Committee and with the approval of the Council, inaugurated a plan of holding four one-day conferences in key cities of the state. These meetings were held and were attended by men from cities, towns and rural areas. The programs covered many phases of medicine and surgery.

County medical societies have found the Scientific Service Committee helpful in supplying excellent programs, in building attendance and interest and in keeping them informed of new things in medicine and surgery.

Doctors James H. Hutton, Frank L. Brown and Robert S. Berghoff have served as chairmen during the fourteen years of the committee's existence.

The committee is still in its infancy, but is growing and will continue to play a part in the history of the Illinois State Medical Society.

LOOKING BACKWARD FROM OUR HUNDREDTH BIRTHDAY

CHARLES J. WHALEN, M. D., LL. B.
CHICAGO

This issue commemorates the fact that the Illinois State Medical Society is one hundred years of age. The organization was founded June 9, 1840. Founders and original members of the Society long since crossed the great divide. Yet they live with us in our daily practice either in tradition or memory.

Though man is not immortal, in a limited sense a society or organization may be. To the

individual, the years bring wisdom but lessen ability to profit by it. A medical organization is under no such handicap. Tradition and experience are its meat.

On this, its hundredth birthday anniversary, the Illinois State Medical Society, standing on a mountain of cumulative experience, greets its membership with a sprightly sense of being younger than ever. This is no false juvenescence. For youth is growth. And the Society is ever burgeoning.

One Hundred Years! This is an age that most societies find venerable. In the West the next oldest contemporary is the Chicago Medical Society, founded in 1850, three years after the debut of the American Medical Association.

Think back and try to reconstruct the life of that time! Chicago in 1840 was a rude frontier town. Rising out of the mud of Illinois prairies, it was a formless collection of wooden buildings expanding without grace or design. State Street was a narrow plank road. Lake Shore Drive was a row of vice shanties called "the dens in the sand." The town sat squarely in the mud. Of water pipes or sewage system there was none. Chicago's charter as a city was three years old. The population of Chicago in 1840 was 4,470. The death rate for Chicago per 1,000 population was not obtainable. Eight years later, or in 1849, the death rate stood 73.8. In 1850 the death rate was 48.96 and for 1939, 10.0. For the State of Illinois the death rate for 1840 was correspondingly high. For 1939, it has been similarly reduced.

Illustrative of the rapid growth of the central west, the population in Chicago in 1840 was 4,470, and that of the State of Illinois, 476,183. Ten years later, in 1850, the population of Chicago was 29,693; and of the State of Illinois 851,470. Now there are over 3,200,000 people in Chicago and over 7,941,000 in Illinois.

The Illinois State Medical Society was organized three years before the establishment of Rush Medical College (1843)—that was the first educational institution in Illinois, and three years before Dr. Oliver Wendell Holmes had announced the infectiousness of puerperal fever. It was nearly two years prior to Crawford W. Long's discovery of ether and two years (March, 1842) before Long performed the first operation under inhalation of ether; and that was seven years earlier than the first use was made of chloroform for the same purpose. Seven years later the American Medical Association was organized.

Since the founding of the Illinois State Medical Society the great plagues of the past no longer mow down our citizens. Infant and maternity mortality have been greatly lowered. Specific remedies, such as quinine, salvarsan, sulfapyridine, sulfanilamide, insulin, and the curative and prophylatic sera, have been discovered. The advances in surgery have been unparalleled. The psychiatrists take our minds apart, polish up the wheels and return many victims of mental disease to useful citizenship.

Of the three great agencies that limited population when the Society was young—famine, pestilence, and war—two are largely under control. Only war is functioning in the same efficient manner.

Hospital care for the sick has been universally established during the 100 years just past and with a resultant saving of many lives. Few of the younger and middle-aged men in the profession today realize that many of their older colleagues who are even now their competitors, went through the horse-and-buggy, kitchen-table stage of medicine and surgery.

Scientific discoveries and application have doubled the life expectancy in the past fifty years and the population of the world in the last hundred years—a greater increase than ever before attained in the history of the world.

In 1840, at the time our society was established, the old gig and gray Dobbin, saddle bags, sulphur and molasses and the great horn spoon were the doctor's *vade mecum*. Contrast this condition with present day methods of transportation and treatment of the sick! The automobile and the aeroplane relegate old Dobbin to the rear. Newer and more successful medication and surgery supplant cruder methods.

Men and causative forces have achieved closer acquaintance in the century that has elapsed since the inception of the Illinois State Medical Society. Nine centuries of progress were attained through those ten decades. With a similarly continuous pace, perhaps the light of the millenium may be unfolded to the world before the approaching century is ended.

Civilization has been maintaining an excellent balance along lines economic, physiographic,

artistic, philosophic, scientific and humanitarian. Without egotism the medical profession may account itself a vital factor in the motivation of these ten pulsing decades. Doctors of the world have played a conspicuous part in unfolding the wonders of scientific progress that have been revealed, and they have helped to keep them unlocked for daily use.

Owing to self-sacrificing labors of medical men during the last hundred years, epidemic and endemic infections, such as malaria, typhoid fever, smallpox, yellow fever, typhus fever, cholera and hook-worm diseases have been banished wherever civilization extends. Through the achievement of bacteriologists and clinicians the dread diphtheria and syphilis are preventable and curable, and meningitis and many other infections will soon cease being a dread to the community. Medical prevention of communicable disease and reduction of the high mortality that prevailed a hundred years ago is the reason why millions of people are alive today who otherwise would have gone to untimely graves.

Passing the subject of medicine, many events of vital interest to mankind have occurred since this Society was founded. Think back and picture the domestic facilities in use in 1840. For instance, when the Society was founded the sewing machine had not been brought out. Visualize a nation of homes without sewing machines and gain a dim idea of the changes our organization has seen.

The sewing machine is only one of the utilities that was lacking in the industries in 1840. Telephones, automobiles, aeroplanes, electric cars, will be left behind at the very start of a reminiscential journey. Steam vessels had just begun regular trips across the Atlantic. The telegraph was slowly coming into general use —the first line ran between Annapolis and Washington. Cables; electric subways; elevated railways; Pullman sleepers; national railway systems; ready-to-wear clothing; the iniquitous delicatessen; modern plumbing—from kitchen sinks to Oscar Hammerstein's bathtub drain pipe; the submarine; smokeless gun powder; electric light; wireless telegraphy; great telescopes that have made astronomy's readings a fireside companion in thousands of homes and educational institutions; typewriters; cotton gins; motorcycles; passenger elevators; moving pictures; gas ranges and a million other details and conveniences of modern building and construction have been brought forth during the last hundred years.

Farm labor is revolutionized by the invention of machinery to perform heavy work better than human hands or brute strength. *The house of McCormick,* headed by the late Cyrus McCormick, who invented the reaper and threshing machine, must be credited with this liberation.

When our Society was established, anthracite coal was still an experiment as a fuel, while whale oil was still to be reckoned with as an illuminant.

Since 1840 the United States has practically doubled in age and quadrupled in point of area, trade, wealth and population. From a struggling adolescent the nation has become a mature woman and a big sister to the world at large.

In 1840 railroad mileage in the United States was about 5,000 miles for the twenty-six states then in the Union. Today it approximates 300,000 miles and traverses forty-eight states. When the Society was begun, the estimated area of those twenty-six states was 940,000 square miles and the population less than 20,000,000. *In* 1939 *the United States area was* 3,026,789 *square miles and the population was more than* 130,000,000. In 1840 the national wealth of the country was $5,000,000,000. *In* 1939 *it was over* $300,000,000,000. The annual production of wealth in 1840 was $1,000,000,000. *In* 1938 *it was* $100,000,000,000. Foreign trade in 1850 was $250,000,000. *By* 1920 *it was* $9,400,000,000 *and by* 1938 *it had again doubled!* In 1840 the center of population of the United States was 23 miles southwest of Parkersburg, West Virginia; in 1938 it was at Bloomington, Indiana; and in 1940 perhaps it will be shown to be located about Chicago.

A host of happenings regarded now as distant history had not yet occurred when the Society first made its appearance. Martin Van Buren was President of the United States in 1840, and "Tippecanoe and Tyler too" was the slogan of the successful presidential candidates. Thomas Carlin was Governor of Illinois, and the mormons had just arrived in Illinois. Abraham Lincoln was practicing law and vowing that if he ever got the chance to hit slavery, he *would*

hit hard. But the Dred Scott decision, that was to prove the truth of Lincoln's maxim that the "Nation could not exist half slave and half free," was two decades in the future, and it was not likely that even in his wildest dreams the ex-rail splitter fancied himself in the White House.

When the Society began its career, Queen Victoria—but three years on the British throne—married Albert. Louis Philippe was on the throne of France. Germany was a welter of quarreling principalities, of which already Prussia seemed the strongest. Italy was a mere "geographical expression," divided among fourteen different states and provinces, two of the fairest of which were under the ever-cursed dominion of the Hapsburgs. The revolution of 1848 had not yet dawned. The Irish famine lay below the horizon. The Turk ruled Roumania. Japan was yet the "Hermit Kingdom," on whose sacred shores no foreigner was allowed. English ships sailed to India by way of the Cape of Good Hope. Australia was known only as a convict's settlement.

Other red letter years during the existence of the Illinois State Medical Society include the French Revolution. Gold was not discovered in California until (1849) and Australia had this good fortune in 1851. Louis Napoleon was made emperor of France in 1852. The Crimean War began in 1853. Commodore Perry's opening of Japan came in 1854, and the end of the Crimean War, 1855. The great mutiny in India was in 1857, as was the Dred Scott decision, and the rumbling of the Civil War that was to come. The first Atlantic cable message was sent August 4, 1857. Secession of South Carolina came December 20, 1860, and emancipation of Russian serfs, 1861. In the United States the civil war of 1861 first cleft and then re-united the nation. Lincoln's Emancipation Proclamation came with the ending of slavery in 1863; followed by surrender of the confederate army, April 9, 1865, and assassination of President Lincoln on April 14, 1865. The Atlantic cable was laid, 1866, and Dominion of Canada established, 1867. Franco-German War was in 1870; France proclaimed a republic, 1873, three years after the capitulation at Sedan. Chicago burned in 1871; and Mt. Vesuvius erupted, 1872. First elevated train ran in New York in 1878. Bartholdi Statue of Liberty was presented by France to the United States, July 4, 1884. Brazil became a republic in 1889 and the Cinema invented, 1894. Cuban revolution was 1895 and the Spanish-American War, 1898. New York subway was opened in 1904. North Pole was discovered, April 6, 1910; and the Republic of Portugal established that same year. United States postal savings bank system was founded in 1911. South Pole was discovered, December 14, 1911. China proclaimed a republic, 1911; and the Peace Palace at The Hague was dedicated in 1913. Starting of the First World War was in 1914; and the Panama Canal opened, August 15, 1914. China was restored as a monarchy in 1915. Russia rid herself of the czar in 1917. United States entered the First World War in 1917; and the termination of that War occurred November 11, 1918.

Perhaps the greatest industrial and social advances in the five score years just ended have been recognition of the value of women and children to the State, and granting of franchise to women over 21 years of age. Will the changes borne by the next hundred years be as strange? Since history is merely a repetition of emotions and events, there is every reason to believe that progress will surprise itself during the next ten decades. A hundred years from now the world will stand, by comparison, where today stands 1840.

EDMUND ANDREWS, M. D., AND HIS "OXYGEN MIXTURES"

ARNO B. LUCKHARDT, M. D., F.I.C.A.*

Abstracted by

WM. ALLEN PUSEY, M. D.

CHICAGO.

Dr. Arno B. Luckhardt did Chicago medicine a service in the recent article "Edmund Andrews, M. D., and His 'Oxygen Mixtures,'" in "Anesthesia and Analgesia." Andrews was one of Chicago's great men and his work in anesthesia one of the historical contributions in that field. Because he was not spectacular, he is remembered, if at all, as an able surgeon and a scientific plodder. Andrews was truly able but he was the antithesis of a plodder.

*Reproduced by permission from Anesthesia and Analgesia, January-February, 1940.

Brilliant, ingenious, original, fruitful of ideas, he was an impressive speaker, wielded a great influence among the intelligent and was a leader of scientific thought in Chicago.

All this is brought out by Dr. Luckhardt, whose careful scientific temperament is hardly to be stampeded into over-estimation, and whose competence to judge Andrews' work in anesthesia can hardly be challenged.

"As an inveterate hero-worshipper, I have read and re-read innumerable biographies of men and women who have distinguished themselves in one or another field of endeavor, but chiefly in medicine. Among them were a few with avocational gifts or talents quite as singular and meritorious as were their real professional accomplishments," wrote Dr. Luckhardt, giving as examples of versatility, Billroth, Stephen Hales, Charles Bell, Albrecht von Haller and von Helmholtz. Then he made the surprising statement:

"But none of the above mentioned, with the exception of Haller, displayed such a catholicity of interest and such a record of profound accomplishment in diverse fields of endeavor as did Dr. Edmund Andrews."

He went on "to discuss superficially a few things I have ascertained about this remarkable man, and I will have but scratched the surface of his notable career."

Then Dr. Luckhardt outlined some of Andrews' "extra-professional activities . . . before I emphasize . . . his monumental contributions to the theory and practice of anesthesia based on his laboratory and clinical work with nitrous oxide."

On graduating in 1852, after a distinguished career in the medical school of the University of Michigan, Andrews became a demonstrator of anatomy there. He was called to Rush as professor of anatomy in 1855.

In protest against the medical education of that time he joined N. S. Davis, John Evans and others in founding the Chicago Medical College, the first school in the country to require a graded course of three years and to establish a hospital (Mercy) as a necessary part of the school.

Andrews served with distinction in the Civil War with Generals Sherman and Grant. As early as 1867 he was converted to the views of Pasteur and Lister, and proceeded to operate in antiseptic surroundings.

His ability as an artist was shown by his paintings of birds and of scenes around Memphis and Vicksburg while under General Sherman and his design for his own book-plate, which he transferred to the block, ready for the printer.

But his greatest contributions outside of medicine were in the natural sciences. He was an accepted expert in botany, zoology, ornithology and geology. He was the first to propose a scientific explanation of the intermittent eruption of geysers and won a place in geological history with his papers on geysers and glaciers. Luckhardt says of his papers on glaciers, "attesting to their value as contributions of permanent merit in this field is the fact that a well-known geologist whom I recently consulted was familiar with their content, and was chagrined that his own colleagues had not given the author more recognition. He was even more surprised when I told him that the author was by profession a physician and surgeon."

Dr. Luckhardt continued: "Dr. Andrews made most of his geological observations in this special field in the Georgian Bay region of the Great Lakes where for many years he camped during the summer. In these studies he early proposed the conception of land glaciers to account for the glacial striae on outcrops, while other geologists believed them due to floating icebergs dragging on bottom. Whether it was he or Louis Agassiz who first proposed and supported this contention by convincing evidence, time prevented me from ascertaining. Even if further research should attribute to Agassiz' priority in this matter, we can but marvel at the observation and deductive skill of this versatile medical interloper whose judgment and conclusions on this matter were better than those of many contemporary and professional geologists."

Luckhardt called attention to Andrews' study in the social sciences and in philology and compared his philological accomplishments to those of Thomas Young, also a physician, who deciphered the Rosetta Stone and was the author of the undulatory theory of light.

This versatility of the man was only pre-

liminary to Andrews' accomplishments in medicine. He early made himself expert in genito-urinary and orthopedic surgery, because he found these subjects relegated to irregulars. He became an expert general surgeon from his military experience and an authority on military surgery to which he introduced a system of case records. He wrote the first monograph on the mortality of surgical diseases. When, because of his exceptional ability in military affairs, he was promoted to an executive position of "pencil pushing," he promptly resigned from the army.

Andrews' attention was turned to the possibilities of nitrous oxide gas in general surgery by observation of its use (undiluted) in dentistry. Under the title "The Oxygen Mixture" there appeared in 1868 his first publication (embodying the first laboratory and clinical studies) on the subject of nitrous oxide-oxygen anesthesia. The title may appear curious with its emphasis on oxygen rather than on nitrous oxide. But it was perfectly logical. In a few pages Dr. Andrews laid down the general principles for the successful use of all inhalation anesthetics and thoroughly disposed of the theory that nitrous oxide effects anesthesia by asphyxia. Paul Bert's contribution in this field was published ten years later.

"In the introductory paragraph of this classic in anesthesia," wrote Luckhardt, "he indicates the reason for engaging in this research which consists of five preliminary experiments on rats, followed by four confirmatory experiments on human subjects.

"Every physician," Andrews wrote, "observing 'the prompt and pleasant anesthetic action of nitrous oxide gas' as used by dentists, 'has wished that in some way it might be made available in general surgery.' Because the oxygen in nitrous oxide is not available, the patient becomes purple in the face, showing all signs of asphyxia with ensuing 'subsultus tendinum,' and dies in a few minutes. 'I have for some time been experimenting' whether free oxygen added to nitrous oxide might anesthetize for indefinite periods without asphyxia and thus render this gas available 'for prolonged operations of surgery.' Fully aware of the incomplete nature of his experimental work, he nevertheless expressed his conviction that his 'Oxygen Mixture' is certainly 'available for a large part of an operation,' and that 'for pleasantness and safety' it was infinitely better than 'chloroform, ether or unmixed nitrous oxide.'

"Such a mixture of nitrous oxide and oxygen (called by Andrews 'The Oxygen Mixture') had been proposed in England, but was never tried because the proposal was 'overthrown' by none other than Dr. Benjamin W. Richardson, pupil of John Snow, and at that time the greatest living authority on matters of anesthesia. As has happened before in the history of science and medicine, the dogmatic pronouncement of Richardson that such a mixture would be unsafe and not successful sufficed to deter all investigators except Dr. Andrews. There seemed to be a general impression in those days that the addition of oxygen to nitrous oxide was positively contraindicated; for Andrews remarked that instead of the oxygen exerting a harmful effect, he believed that asphyxia would be prevented by its use."

Luckhardt quoted Andrews' protocols of his five experiments on rats and four on humans.

"In evaluating these experiences, admittedly insufficient in number, Dr. Andrews predicts that a 20 per cent. oxygen and 80 per cent. nitrous oxide mixture will prove to be the pleasantest and safest anesthetic known, providing that pure gases (free from air) can be obtained and providing that dilution with air can be avoided during its administration by devising a better 'inhaler tube' for the mouth, with the anesthetist carefully compressing the nares. Dr. Andrews points out that his own tests show that the nitrous oxide generated for these experiments contained 'considerable free oxygen' from atmospheric air, which, with the nitrogen, weakened 'the power of the article.'"

In later papers Andrews reported his other experiences and commented on them in these words:

"These figures indicate that the mortality from chloroform is 'about eight and a half times greater than by ether', that a mixture of them lies between the two, and that "nitrous oxide, contrary to our first impressions, turns out to be the safest of all anesthetics.'"

"A good deal more might have been said about this remarkable man and his work. * * *

At that, I only presented you with a meager bird's-eye view of a great man who has never been honored publicly except by you; for to this day but few of the professional and academic men of Chicago, where he labored so intensively and fruitfully for nearly 50 years, know of their late profound, versatile citizen and scholar even by name. And of course, they know even less of his accomplishments, benefactions and graces."

* * * Luckhardt concluded that, "Perhaps men of this type are too indifferent, too modest and too busy to properly display their wares, and thus naturally do not come to honors which they so richly deserve."

UNITED STATES LEADS WORLD IN CHEMISTRY; GERMANY 3RD

Leadership in chemistry throughout the world is now in possession of the United States, it is disclosed in a report submitted to the American Chemical Society by Prof. E. J. Crane of Ohio State University, editor of Chemical Abstracts.

Germany, which ranked first during the World War period and even a decade ago, has now dropped to third place with Great Britain second. Russia and Japan show striking gains, Prof. Crane reports.

English is predominantly the language of science, the United States and England accounting for 40 per cent of all scientific periodicals published.

The report is based on an analysis of 65,000 abstracts of chtmical discoveries reported last year in Chemical Abstracts, Prof. Crane explained.

Chemical patents account for much of the leadership of the United States. During the last five years U. S. chemical patents have increased 15 per cent in number over the preceding five years. During this same time British chemical patents have declined 12 per cent, French chemical patents have decreased 23 per cent and German chemical patents have dwindled 30 per cent of their former number.—Science News-Letter.

IF THE GOVERNMENT IS INTERESTED

Why does the Government continue to beat a tired horse?

Why does it belabor Medicine with anti-trust prosecution which gets nowhere, when its real object is to find out why the costs of medical care are allegedly so high for low-income groups?

Does medical care consist only of physician's services?

Has the Government never heard of hospitals, manufacturers of medical and surgical supplies, manufacturers of drugs, electrical equipment, optical goods?

How about the salary lists for case workers, accountants, auditors and supervisors, stationery, postage, printing—all the machinery which now grinds out "medical care" for the low or the no income group?

Have these things anything to do with the alleged high cost?

How are they related to physicians' fees, if as, and when collected?

What is the actual (not political) relationship between administrative and other non-professional-service costs, and fees paid for purely professional medical services in care rendered to low income groups?

Is the Government really interested?

If so, it can find out.—Westchester Medical Bulletin.

DEATH IS PERMANENT

A company that employs many trucks in its business admonishes its drivers as follows: "The most dangerous part of the truck is the nut behind the wheel. Say it with brakes and save the flowers.

THE ONE HUNDREDTH ANNIVERSARY MEETING

The 1940 Annual Meeting of the Illinois State Medical Society is the Centennial Meeting, for in June 1840, the first organization of the "State Medical Society of Illinois" was completed. Our medical historians inform us that this organization was maintained until 1847, when the interest apparently waned, and the Society was somewhat dormant until in 1850, when a reorganization was achieved and the Illinois State Medical Society has continued to function since that time.

The Centennial Meeting of 1940 is intended to show a "Century of Progress in Medicine." The program, which is published in this number of the ILLINOIS MEDICAL JOURNAL has been carefully prepared and those responsible for the various portions of the program have kept in mind the interests of the general practitioner.

More Joint Sessions have been arranged for this meeting, and instead of the usual stag entertainment on Tuesday evening, a joint meeting has been substituted with several speakers carefully selected to discuss some problems in medicine of general interest to all physicians.

The Hall of Health in the large Peoria National Guard Armory should be of much interest to the public in and around Peoria, and many outstanding health exhibits have been arranged to show what has been done for the protection of the health of the citizens of our State. Many cooperating organizations have assisted in developing these fine exhibits, covering all phases of health and health work.

It is hoped that every member of the Illinois State Medical Society will read the various announcements and the program for the Centennial Meeting, and that the largest attendance in the history of the Society will be present on this gala occasion.

Program

of the

One-Hundredth Annual Meeting

ILLINOIS STATE MEDICAL SOCIETY

Peoria, Illinois, May 21, 22, and 23, 1940

1940 Official Program

GENERAL SESSIONS

OPENING MEETING

TUESDAY AFTERNOON, MAY 21, 1940

1:00—Meeting officially opened by President, James H. Hutton, Chicago.

Invocation by Dr. J. B. Rosemurgy.

Address of Welcome by Mayor of Peoria.

Address of Welcome by President of Peoria County Medical Society, O. E. Barbour, Peoria.

Report of Chairman, Committee on Arrangements, Arthur Sprenger, Peoria.

WEDNESDAY MORNING, MAY 22, 1940

10:00—Oration in Medicine—"The Role of the Kidney in Cardiorenal-Vascular Disease." Leonard G. Rowntree, Philadelphia, Penn.

10:40—Oration in Surgery—"Thyroid Disease: Its Diagnosis and Management." Frank Lahey, Boston, Mass.

WEDNESDAY AFTERNOON, MAY 22, 1940

1:30—President's Address—James H. Hutton, Chicago, President Illinois State Medical Society.

THURSDAY MORNING, MAY 23, 1940

Induction of the President-elect.

Immediately before the closing of the meeting of the House of Delegates, the President-elect, J. S. Templeton, Pinckneyville, will be inducted into the office of President of the Illinois State Medical Society by the retiring President, James H. Hutton of Chicago.

All members and guests at the meeting may be present at this interesting function.

JOINT SESSIONS

TUESDAY EVENING, MAY 21, 1940

Shrine Temple

MEETING OF ALL SECTIONS

8:00—"The Operative Treatment of Carcinoma of the Esophagus." Dallas B. Phemister, Professor and Chairman of the Department of Surgery, University of Chicago, Chicago.

8:30—"Recent Advances in Gynecologic Endocrinology." J. P. Greenhill, Professor of Obstetrics and Gynecology, Loyola University School of Medicine. Professor of Gynecology, Cook County Graduate School of Medicine, Chicago.

9:00—"The Nature of Obesity." L. H. Newburgh, Professor of Clinical Investigation, Department of Medicine, University of Michigan Medical School, Ann Arbor, Michigan.

9:30—"Choice and Dosage of Chemotherapeutic Agents for Bacterial Infections." Henry L. Barnett, Research Fellow in Pediatrics, Washington University School of Medicine, St. Louis, Missouri.

WEDNESDAY MORNING, MAY 22, 1940

9:00—"Selection of Cases for Splenectomy." Russell L. Haden, Chief of the Medical Service, Cleveland Clinic, Cleveland, Ohio.

9:30—"Diagnosis and Treatment of Common Deficiency Diseases in the Adult." Thomas D. Spies, Associate Professor of Medicine, University of Cincinnati, College of Medicine, Cincinnati, Ohio.

NOTE DAYLIGHT SAVING IN PEORIA

10:00—Oration in Medicine—"The Role of the Kidney in Cardiorenal-Vascular Disease." Leonard G. Rowntree, Philadelphia, Penn.

10:40—Oration in Surgery—"Thyroid Disease: Its Diagnosis and Management." Frank Lahey, Boston, Mass.

THURSDAY MORNING, MAY 23, 1940

9:00—"Cholecystography: With Special Reference to the Diagnostic Value of the Emptying Time." Adolph Hartung, Professor of Roentgenology, University of Illinois College of Medicine, Chicago.

9:30—"Pneumonia: Its Diagnosis and Treatment." W. B. Sutliff, Assistant Director Pneumonia Control Division, Department of Health, New York City, N. Y.

10:00—"Indications and Results of Subtotal Resection of the Pancreas for Hypoglycemia." Vernon C. David, Chairman of the Surgical Department, Rush Medical College and Presbyterian Hospital, Chicago.

10:30—"Visual Field Changes." C. W. Rucker, Assistant Professor of Ophthalmology, University of Minnesota Graduate School of Medicine, Associate in Ophthalmology Mayo Clinic, Rochester, Minn.

SECTION PROGRAMS

SECTION ON MEDICINE

Edgar M. Stevenson.....Chairman
Willard O. Thompson.....Secretary

TUESDAY AFTERNOON, MAY 21, 1940

"Collapse Therapy in Pulmonary Tuberculosis." Jerome R. Head, Chicago.

Five to eight year end results are reported on five hundred cases of pulmonary tuberculosis treated at Edward Sanatorium between 1932 and 1936. During this period the various measures of collapse therapy have been used whenever they were deemed indicated. The statistics have been tabulated to show the results of the various collapse measures and the results of the whole program in the treatment of tuberculosis. These figures are compared with those collected from the same institution during years when collapse therapy was used sparingly or not at all. From this comparison it has been possible to make an estimation of the value of the different procedures.

"Diagnosis and Management of Early Tuberculosis." Robinson Bosworth, East St. Louis.

The paper discusses the seriousness of tuberculosis, the difficulties, and the methods required to make a diagnosis of early pulmonary tuberculosis; the treatment indicated for early cases if progress of the disease is to be prevented and arrest of the pathology effected before the patient has spread the infection to others.

"Pregnancy and Tuberculosis." Fred M. F. Meixner, Peoria.

Divergency of opinion among writers as to proper procedure when pregnancy and tuberculosis both are present. Indications for therapeutic abortion in different types of cases. Proper time to intervene. Conduct of patients where pregnancy is not interrupted. After treatment important. Reference to Roentgen-ray technique for therapeutic abortion.

"The Insulins in the Management of Diabetes." Thomas D. Masters, Springfield.

This paper will describe the indications and use of the various insulins separately and combined in the management of diabetes mellitus.

"Applications of Vitamin B_1 to Neuropsychiatry." F. G. Norbury, Jacksonville.

This paper deals with therapeutic possibilities that are available in neuropsychiatry with vitamin B_1. Before synthetic vitamin B_1 was available the value of vitamin B was known. The synthetic preparation has lent itself to greater knowledge of metabolism of nerve tissue and to therapeutic application. Experimental and clinical results are cited.

"Endocrine Studies of Patients After Subtotal Hypophysectomy." Paul Starr and Loyal Davis, Chicago.

Twenty-five patients who had been operated upon for pituitary tumor from one to ten years previously were studied. Laboratory tests of thyroid, parathyroid, diabetic, adrenal and gonad function were performed and the results compared. Indications for specific therapy appear and interpretations of pituitary physiology are suggested.

"The Treatment of Acute Glomerulonephritis." Harold C. Lueth, Robert W. Keeton, and Mr. Harold Hailman, Chicago.

Based on the past four years experience at Research and Educational Hospitals and a careful review of the records of the medical service for the past 15 years, the treatment of acute glomerulonephritis is discussed in detail. This includes a brief consideration of the incidence, etiologic factors, diagnosis and prognosis of the disease. A complete program for the management of patients with acute glomerulonephritis in its various stages based on physiologic considerations is given. Similarly the complications as acute pseudouremia and cardiac failure are discussed fully.

"Laboratory Aids in the Diagnosis of Coma." L. Gerber, Peoria.

Since there are many causes of coma that require emergency treatment to save life, the importance of immediate diagnosis is evident. Advances and improvements in laboratory methods make it possible for laboratories, even in small hospitals, to aid in these emergencies, and particularly in those cases where a clinical history cannot be obtained. Frequently the laboratory can point directly to a diagnosis, notably in coma arising from some exogenous or endogenous poison. Even when the cause of coma is known, the laboratory often offers a means of determining the degree of intoxication and the effect of treatment. The various causes of coma that lend themselves to laboratory procedures include alcoholism, trauma. diabetic coma and insulin shock, uremia, poisoning by barbiturates, carbon monoxide, and bromides, meningitis, pneumonia, and leukemia. Applications of tests to the fluids of the body such as blood, urine, spinal fluid, and gastric contents are described. Slides present the most helpful laboratory data.

Discussion only on receipt of properly executed blanks.

TUESDAY EVENING, MAY 21, 1940

MEETING OF ALL SECTIONS

(For complete program and abstracts of papers, see Joint Sessions.)

WEDNESDAY MORNING, MAY 22, 1940

Meeting of All Sections

(For complete program and abstracts of papers, see Joint Sessions)

WEDNESDAY AFTERNOON, MAY 22, 1940

Chairman's Address—E. M. Stevenson, Bloomington.

"The Specific Treatment of Anemia." Russell L. Haden, Cleveland, Ohio.

The possible primary factors in the production of an anemia are: (1) mechanical blood loss, (2) excessive hemolysis of red cells, (3) depression of bone marrow activity so that fewer cells are formed, and (4) a deficient supply of the specific red cell building materials, iron and the erythrocyte maturing factor of liver.

The treatment of anemia depends on the recognition of its essential factors operative in producing the anemia. The therapeutic procedures considered are: (1) transfusion, (2) removal or treatment of the cause, (3) diet, (4) iron, (5) liver and liver substitutes and (6) splenectomy. These procedures are considered in detail.

"The Maintenance Treatment of Pernicious Anemia with Parenteral Liver Extract." Howard L. Alt, Chicago, and Richard H. Young, Evanston.

During the last eight years, fifty patients with pernicious anemia have been maintained for varying intervals with parenteral liver therapy. Two of these patients have received parenteral liver therapy exclusively during the entire period. Careful blood counts and neurologic examinations have been made at frequent intervals. In analyzing this series of cases, the following points will be emphasized:

1) The criteria of complete remission in pernicious anemia.
2) The maintenance dose of various concentrated liver extracts.
3) The course of neurologic changes with adequate and with inadequate treatment.
4) The relation of the erythrocyte picture to progression of cord degeneration.
5) Allergy to parenteral liver extract.

"Contribution of the Laboratory to the Treatment of Hemorrhage." Armand J. Quick, Milwaukee, Wisconsin.

It has been established that prothrombin, thromboplastin, calcium, and fibrinogen, are essential for the coagulation mechanism. Lack of calcium and fibrinogen are very rarely the cause of bleeding. Knowledge concerning thromboplastin is still unsatisfactory. Though blood contains a great excess of prothrombin, nevertheless it has been found by the newer laboratory methods that this constituent is low in many newborn infants, in cases of obstructive jaundice, and often in patients with serious liver damage. With the discovery of vitamin K, it has been possible to establish that the first class is caused by a simple lack of vitamin K: the second by poor absorption; and the third by impaired utilization for the synthesis of prothrombin.

"Vitamin K." Raymond W. McNealy, Chicago.

The importance of the hemorrhagic tendency in patients with obstructive jaundice has been emphasized my many writers.

In obstructive jaundice there are two important disturbances in the physiology of the biliary tract. The first is retention in the biliary tract of substances which normally should pass into the intestines and the second is a disturbance in the absorption of important substances from the intestine which should then pass by way of the portal circulation to the liver. Interruption of these mechanisms may be accountable for the train of disturbed physiological processes which lead to prolonged bleeding time and hemorrhage. Among other things the prothrombic content of the blood is reduced. Since this content must be maintained at a certain level to insure against prolonged bleeding or hemorrhage some attempt must be made to increase its production or synthesis by the liver.

The essentials in the management of these cases are enumerated.

"The Clinical Application of Vitamin K." Hugh R. Butt, Rochester, Minnesota.

The clinical usefulness of vitamin K in the prevention and control of bleeding associated with obstructive jaundice is now well established. It has been observed recently that a deficiency of prothrombin can occur in hepatic injury without jaundice, in various gastro-intestinal disorders, in instances in which there has been an inadequate intake of food and in newborn infants. Hemorrhage in these conditions usually is not recognized as being associated with a deficiency of prothrombin. Our experience with the use of concentrates of alfalfa and the newer synthetic compounds with vitamin K activity in the control of the hemorrhagic tendency which may exist in the forementioned disorders will be discussed.

"The Prognosis in Juvenile Rheumatic Fever." Stanley Gibson, Chicago.

Many factors influence the prognosis of rheumatic fever arising in childhood. Age at outset, mode of onset whether with chorea, polyarthritis, or carditis, presence of multivalvular involvement, pericarditis, and rheumatic nodules are considered in relation to prognosis. The study is based on 1487 cases of rheumatic fever. Many of these patients have died. Some have been lost to view. The present status of the remainder, followed for varying lengths of time, is discussed.

Discussion only on receipt of properly executed blanks.

THURSDAY MORNING, MAY 23, 1940

Meeting of All Sections

(For complete program and abstracts of papers, see Joint Sessions)

SECTION ON SURGERY

Frederick H. Christopher.....Chairman
Charles L. Patton.....Secretary

TUESDAY AFTERNOON, MAY 21, 1940

Joint Session with Central States Society of Industrial Medicine and Surgery

2:00—"Wound Healing." Michael Mason, Chicago.

Discussion opened by Hilger P. Jenkins, Chicago.

"Treatment of Infected Wounds." David J. Lewis, Springfield.

A wound which has been neglected or left open for six hours or more should usually be considered as infected and will probably heal by second intention.

Any one caring for a wound should remember Pare's statement, "I dressed him. Nature healed him."

The subject matter will be discussed under two headings:

1. Care of the wound itself—primary care, dressings, use of antiseptics, position, splinting, preservation of function of the part involved, use of drains, use of tissue digestants and wound stimulants, skin grafting, passive motion, physiotherapy.

2. Care of the patient—effect of patient's condition on healing of the wound, hydration, age, constitutional diseases, anemia, etc. Effect of the wound on the general condition of the patient."

"Postoperative Thrombosis and Embolism." Geza de Takats, Chicago.

"Treatment of Compound Fractures." Wm. R. Cubbinss, James J. Callahan, and Carlo S. Scuderi, Chicago.

Compound fractures in our clinics have been handled in the simplest possible manner. Cleansing and removal of hair and dirt around the edges of the wound; careful scrubbing and cleansing of the wound itself, with normal salt solution; complete and accurate debridement, with removal of all dead tissue and detached fragments. If bone is soiled, scrub with a brush or chisel out the soiled area. Loose closure, stitched one inch apart, so that the extravasated fluid may continue the cleansing process. No drain. Frequent changing the first 72 hours of dressings. No washing of wound. Immobilization and, in leg compounds, with skeletal traction in os calcis.

"Treatment of Burns." Chester R. Zeiss, Chicago.

The prerequisite of any burn therapy should be to relieve pain, prevent excessive loss of body fluids, reduce absorption of toxins, hasten separation of dead tissues, prevent or minimize scar tissue formation, minimize surface infections, and promote and enhance healing.

A modification of the Ambrine technique has been used with success. The materials needed are inexpensive and consist of a paraffin with a low melting point, a double boiler, a water jacket atomizer, a fan, a camels hair brush, thin sterile cotton, and absorbent or cellucotton.

The advantages of the paraffin wax treatment are, (1) relief of pain immediately or within 24 hours, (2) the period of toxemia is lessened, (3) infection is minimized, (4) healing is rapid, (5) cicatricial formation is at a minimum. (6) the attending surgeon is always aware of changes occurring at the burned site.

TUESDAY EVENING, MAY 21, 1940

Meeting of All Sections

(For complete program and abstracts of papers, see Joint Sessions)

WEDNESDAY MORNING, MAY 22, 1940

Meeting of All Sections

(For complete program and abstracts of papers, see Joint Sessions)

WEDNESDAY AFTERNOON, MAY 22, 1940

"Care of the Feet in Normal Children." Harold Sofield, Oak Park.

Many divergent opinions are prevalent as to proper care of the feet of babies and children. Popular magazines often carry very contradictory suggestions and various textbooks promote contradictory ideas. From a study of pathological conditions of children's feet in three of the largest orthopedic clinics in Chicago during the past twelve years, and from the examination and care of many normal feet of children, some definite suggestions as to proper care of the feet during the growing periods are made and a discussion of proper footwear is advanced.

Discussion opened by Walter Fischer, Chicago.

"Cholecystectomy; Technique and Postoperative Treatment." Illustrated with Motion Pictures. Ralph B. Bettman, Chicago.

The technique of the author as developed during many years as surgeon of the Michael Reese Gall Bladder Group is illustrated by means of motion pictures and the rational of the various steps is described. The reason for choice of incisions, the non-use or use of drains, as well as the methods of visualizing the common duct are discussed. There are definite and reliable indications for intrinsic exploration of the common duct. The author is not in sympathy with the present vogue of Choledochostomy in almost every case. The after treatment is extremely important but should be simple rather than complicated.

"Cholecystitis and Cholelithiasis in Children." R. A. Tearnan, Decatur.

Cholecystitis and cholelithiasis in children has always been considered a rare disease.

This opinion, however, will have to be revised judging from the number of cases reported recently in the literature. Due to the fact that almost all of the cases reported were first diagnosed as appendicitis, it seems that the incidence of cholecystitis and cholelithiasis in children should be given due consideration when confronted with an acute abdomen.

We wish to report a case of cholelithiasis in a boy nine years old, diagnosed by x-ray and confirmed at time of operation.

Discussion opened by John A. Wolfer, Chicago.

"Transurethral Approach to the Diagnosis and Treatment of Infections of the Seminal Vesicles." Robert H. Herbst and James W. Merricks, Chicago.

Historical review of the surgery of seminal vesiculitis. Infection in these organs frequently persists after subsidence of prostatitis due to obstruction in the ejaculatory ducts. Technique of catheterization and dilatation of the ejaculatory ducts. Roentgenological visualization of the seminal vesicles as an aid in diagnosis. Successful treatment of these infections depends upon the institution of the fundamental principal of surgical drainage. Case reports. Lantern slides.

Discussion opened by Charles Weller, Aurora.

"Prostigmin in Peripheral Vascular Disease." Samuel Perlow, Chicago.

Prostigmin is a parasympathetic stimulator. Pharmacologically it has been shown to cause vasodilation. Clinically it has been helpful in the treatment of peripheral circulatory disturbances.

Discussion opened by Frank V. Theis, Chicago.

THURSDAY MORNING, MAY 23, 1940

Meeting of All Sections

(For complete program and abstracts of papers, see Joint Sessions)

SECTION ON EYE, EAR, NOSE AND THROAT

Frank W. Brodrick.....Chairman
Thomas D. Allen.....Secretary

TUESDAY MORNING, MAY 21, 1940

9:00—"The Operative Treatment of Deafness." George E. Shambaugh, Jr., Chicago.

Ever since otosclerosis was discovered as the most important cause for progressive conduction deafness in adult life, attempts have been made to remove the obstruction to sound

conduction so that these people might again hear air-borne sounds. Barany, Jenkins, Holmgren, Sourdille and Lempert have worked on this problem and have all made important contributions toward its solution. Experience with the Lempert operation over a two-year period has shown that new bone formation in and around the newly created fistula is the most frequent cause for subsequent loss of the initial hearing improvement. With improved technique in making the fistula, and using a new method for removing bone dust particles the fistula has remained open and the hearing improvement has been maintained in a high percentage of cases. Case reports and presentation of cases.

Discussion opened by Robert Henner, Chicago.

9:30—"Early Glaucoma." Virgil Wescott, Chicago.

Glaucoma has fatigued the attention of medical men since the beginning of time. With the exception of some operative procedures, no real lasting contributions have been made as to its etiology or treatment. Its symptoms and pathology are well known. Its cause will never be known unlesss opththalmologists turn internists.

Discussion opened by W. A. McNichols, Dixon.

10:00—"Some Psychological Effects of Deafness in Children." George L. Drennan, Jacksonville.

Ten years of experience with deaf children has led me to summarize some of my observations.

Shambaugh said, "No one knows the extent of the world of silence." I would change this to say, "No one knows the loneliness of the world of silence."

That hearing and speech are important in the normal development of a child may be seen when we compare the deaf with the hearing child between the ages of two and seven years. The deaf child is at a stand-still, while the hearing child develops rapidly.

When the deaf child finds he can no longer communicate with or understand his companions, is it any wonder that he feels isolated. depressed or persecuted?

Discussion opened by Robert H. Gault, Ph.D., Northwestern University, by invitation and by Bert I. Beverly, Chicago.

10:30—"Ocular Hemorrhages in Kodachrome." Roy O. Riser, Park Ridge.

This will be a lantern slide demonstration of hemorrhages in full color. A few hemorrhages of lids, bulbar conjunctiva, and anterior chamber will be followed by a number of preretinal, retinal and subretinal hemorrhagic conditions. These will be subdivided into those of trauma, thrombosis, hypertension, diabetes and albuminosis and blood discrasias.

Discussion opened by Beulah Cushman, Chicago.

11:00—"Diagnosis and Treatment of Sinusitis by Proetz' Method." Hanby L. Ford, Champaign.

History, technique, Proetz method, based upon physical behavior of fiuids, necessitating an exactitude in positioning of patient, careful reduplication of technical factors in roentgenography in the upright position—offers a method of unquestioned value in partial radiopaque filling. ,

Therapeutically, with ephedrine in saline, it has been generally accepted.

Discussion opened by George Woodruff, Joliet.

11:30—"The Relation of Meckle's Ganglion to Accommodation and Intraocular Tension." W. H. Luedde, St. Louis, Missouri. Guest speaker.

Clinical experiences are presented which indicate that topical applications to the mucosa near the spheno palatine (Meckle's) ganglion or injections of novacaine into that area by way of the posterior palatine canal as used for nerve blocking for dental surgery, may affect intraocular pressure. Also, a similar result in severe spasm of accommodation is reported. Microanatomical relations of the ganglion are considered in suggesting an explanation for these results.

BUSINESS MEETING

TUESDAY AFTERNOON, MAY 21, 1940

INSTRUCTION COURSES

OPHTHALMOLOGY.

2:00-3:30—"Neuro-opththalmology." Max M. Jacobson, Chicago.

Neuro-perimetry, a subdivision of Neuro-ophthalmology, will be presented in essential detail; a complete necessary reference list will be given; its importance as a "connecting link" between Neurology, Ophthalmology, Neuro-surgery and Internal Medicine will be shown. A careful analysis of the anatomy of the central visual pathways, its anatomical relations and localization of the constituent nerve fibers will be discussed, aided by the projection of pictures and diagrams. The clinical application of the knowledge of the anatomy of the central visual pathways will be presented. Certain localizing phenomena of cerebral import will be considered.

The anatomy of, lesions of, and examination of the pupillomotor pathways will be discussed.

There will be no demonstration of anatomical specimens nor clinical patients.

3:30-5:00—Dry Clinic. Sanford Gifford, Chicago.

OTOLARYNGOLOGY.

2:00-3:30—"Irrigation of the Frontal and Maxillary Sinuses." O. E. Van Alyear, Chicago.

Irrigation in the treatment of disease of the frontal sinus is a procedure not in common use in rhinology. Most rhinologists would advocate this form of treatment as an adjunct to the other therapeutic methods if they were convinced that a safe dependable technique could be developed, applicable to most cases. Failure to develop readily such a technique is due to the extreme anatomic variations which characterize the frontal sinus and its intranasal connections. Familiarity with these variations, however, simplifies the approach to the sinus and one equipped with this knowledge should, with sufficient application, develop a technique which will prove satisfactory.

Irrigation of the maxillary sinus is the office routine of most rhinologists. Three methods of approach are available and rhinologists may be grouped according to the method they use.

A portion of the time will be allotted to the practical application of cannulization technique, and for this purpose there will be available a supply of specimens and cannulas of the types recommended for use in the irrigation of these sinuses.

3:30-5:00—Dry Clinic. Hans Brunner, Chicago.

TUESDAY EVENING, MAY 21, 1940

Creve Coeur Club

6:00—Annual Banquet of the Section. "Five Years at the Peking Union Medical College." Peter C. Kronfield, Chicago.

8:00—Meeting of all Sections.

(For Complete Program and Abstracts of Papers, See Joint Sessions)

WEDNESDAY MORNING, MAY 22, 1940

Meeting of All Sections

(For Complete Program and Abstracts of Papers, See Joint Sessions)

WEDNESDAY AFTERNOON, MAY 22, 1940

2:00—Business Meeting—Election of Officers.

2:15—Chairman's Address. F. W. Brodrick, Sterling.

2:30—"History of the Artificial Larynx." William L. Hanson, East St. Louis.

Czermak, 1859, was the first inventor of an artificial larynx. Improvements were made by Foulis, 1877; Stoerk, 1887; Tapia, 1914; Lederer in 1922; McKenty, 1924; Sheard, 1931—a metallic tube with a vertical reed; Burchett and Riesz made four instruments for Bell Telephone Laboratories from 1931 to 1934. In 1939, my patient, Mr. Ottie Roberts, and I, made a new instrument of hard rubber case and reed which in our opinion is easier to operate.

Discussion opened by F. L. Lederer, Chicago.

3:00—"Evaluation of Accommodation and Convergence in Refraction." Philip A. Halper, Chicago.

A refraction is incomplete without the knowledge of the accommodative range, muscle balance and muscle strength for it is in the framework or environment of their binocularism that the ametropic eyes should work.

The muscle examinations must of necessity be complete but not too time consuming. The muscle balance can be determined either by prism displacement or with the Maddox rod. Fusion and depth perception should be ascertained with a stereoscope in certain cases.

Orthopsis, the use of prisms in the glasses and surgery are to be used when indicated.

Discussion opened by Earle B. Fowler, Chicago.

3:30—"When Hearing Aids Should Be Used." Austin A. Hayden, Chicago.

A hearing aid should be used (1) when hearing loss is sufficient to handicap the individual (a) socially or (b) economically; (2) when the hearing can be substantially improved by an instrument; (3) when the patient is willing to wear one.

Choice of bone or air conduction and carbon or tube amplification must be carefully considered. Each has definite advantages.

Correlation by Otologists of the efforts of Leagues for the Hard of Hearing, manufacturers of hearing aids and other agencies is necessary if the deafened are to be adequately served.

Discussion opened by Elmer W. Hagens, Chicago.

4:00—"Splenic Extract in Glaucoma." Michael Goldenburg, Chicago.

A clinical report is presented on the use of this medicament in the various types of glaucoma over a two year period. Some graphs are shown, noting type, time, and reaction. The opinion is expressed that it has therapeutic value in certain types and under certain conditions, but these values are not always predictable. No untoward reactions have been observed during this time.

Discussion opened by F. Fenger, Clinical Research Dept., Armour & Company, Chicago. (By invitation.)

4:30—"Otolaryngology and the Weather." Noah D. Fabricant, Chicago.

The fact that the weather and the season can now be measured, constitutes a distinct advantage in evaluating contemporary otolaryngological problems. Definite alterations such as those involved in daily temperature and barometric pressure changes can be utilized to establish the relationship between the weather and acute tonsillitis, acute otitis media, the common cold, sinusitis, mastoiditis, laryngitis, tracheitis, migraine and acute infections of the upper respiratory tract. The vasomotor and biochemical changes that are induced in such individuals are described, and a series of illustrative case reports presented to demonstrate the significance of the weather in precipitating a variety of otolaryngological diseases.

Discussion opened by Max Berg, Chicago.

THURSDAY MORNING, MAY 23, 1940

SULPHUR SYMPOSIUM

9:00—"The Chemistry of the Sulfonamides." Frank T. Maher, University of Illinois, Chicago. (By invitation.)

A brief historical review of the development of the sulfonamides and preceding compounds is presented. This leads into a discussion of the structures of the more important compounds of the group, some of their chemical properties and physical attributes.

Methods of recovery and determination, together with studies in distribution, metabolism and fats in the animal body are discussed.

A brief outline of theories of mode of action, together with a preliminary survey of toxic phenomena and therapeutic application is included. Formulas of the more outstanding compounds are presented, together with their more common trade names, and the dates of their presentation to the literature.

The probable configuration of the chemical compounds in this group will be taken up to show their relation to each other and the probable reasons for their activity.

"Sulfanilamide and Related Compounds." E. M. K. Geiling, University of Chicago, Chicago. (By invitation.)

The introduction of sulfanilamide and related compounds marks a new epoch in chemotherapy. Many new compounds will be introduced in the near future. Hence great care must be exercised in testing out the newer products. Sulfanilamide, sulfapyridine, and sulfathiasol will be discussed from the toxicological angles and the indications for their use will be pointed out.

"Practical Application of Sulphuramids to Otolaryngology." Glenn Greenwood, Chicago.

Treatment of clinical bacterial infections with sulphur compounds has been particularly successful in pathology of the upper respiratory tract. Especially is this true of otitic infections caused by the beta hemolytic streptococcus and the pneumococcus.

A comparative resume of cases involving the upper respiratory tract, primarily in children, will be presented, emphasizing somewhat the masking of symptoms and signs produced by this mode of therapy.

"Sulfanilamide in Ophthalmology." Harry W. Woodruff, Joliet.

Report of infected eye injuries.
Report of cases of Gonorrheal Ophthalmia.
Various cases reported in literature.
Ophthalmia Neonatorum. Corneal Ulcers. Trachoma.
Sympathetic Ophthalmia.
Failures in eye diseases.
Importance of hospitalization of cases in which large doses are used.
Importance of the use of Sulfanilamide as a prophylaxis in operative cases.

SECTION ON PUBLIC HEALTH AND HYGIENE

John J. McShane.....Chairman
N. O. Gunderson.....Secretary

TUESDAY AFTERNOON, MAY 21, 1940

SYMPOSIUM ON SYPHILIS

"The Kahn Verification Test for Syphilis." H. J. Shaughnessy, Ph. D., Springfield.

Discussion opened by E. Piszczek, Chicago.

"The Continuous Alternating Scheme of Treatment in the Control of Acquired Syphilis." R. A. Vonderlehr, Washington, D. C.

The control of syphilis demands different methods and techniques than we have applied to the control of other communicable diseases. The outstanding method for control of early syphilis—hence of all syphilis—is continuous and adequate treatment. The Continuous Alternating Scheme sponsored by the Cooperative Clinical Group and the U. S. Public Health Service is a tested regime that surpasses in efficiency and other schedule readily available to the general practitioner. A comparison is made between this system, the American intermittent scheme, and the intensive scheme advocated by Shultz-Pullitzer. Comparisons are based upon ability to obtain rapid reversal of positive blood, prevent mucocutaneous relapse, forestall late nerve, heart, and bone manifestations of syphilis, and bring about probable "cure." In 15 months the individual patient continuously treated will be protected against relapse or progression of the disease in 99 cases out of 100. At the same time treatment sets up a chemical quarantine which prevents spread of the infection. Herein, lies the control of syphilis.

Discussion opened by G. O. Taylor, Chicago.

"Diagnosis and Treatment of Syphilis in the Infant and Teen Age." F. E. Senear, Chicago.

A discussion of the symptoms and signs of syphilis as seen in the infant shortly after birth, in the recurrent period, and in the tardy congenital type. Consideration of the essential and non-essential stigmata resulting from the disease, and their place in diagnosis. Serologic finding in congenital syphilis, with particular reference to the effect of syphilotoxemia upon the serologic reaction. A review of the drugs employed in the treatment of syphilis, and a study of the literature with regard to the comparative value of various systems of treatment.

Discussion opened by H. J. Burstein, Decatur.

"Criteria for Discontinuing Treatment for Syphilis." S. W. Becker, Chicago.

The various considerations which justify discontinuance of certain phases of syphilotherapy or of all treatment for syphilis are discussed. The various treatment measures comprise both specific and non-specific procedures. The criteria vary with the variety of syphilis, namely: prenatal, early acquired, late acquired: with physiologic and pathologic states, namely: age, parturition and the presence of concomitant disease; and the results of clinical and serologic examination. In a large majority of cases decision relative to discontinuance of therapy should be made on the basis of definite schedules for treatment or only after consultation with a syphilologist.

Discussion opened by H. M. Soloway, Springfield.

TUESDAY EVENING, MAY 21, 1940

Meeting of all Sections.

(For complete program and abstracts of papers, See Joint Sessions).

WEDNESDAY MORNING, MAY 22, 1940

Meeting of all Sections.

(For complete program and abstracts of papers, See Joint Sessions).

WEDNESDAY AFTERNOON, MAY 22, 1940

2:30—"Prevention of Contact Infection in Children." Normal T. Welford, LaGrange.

Contact with infected adults in a household is often the source of tuberculosis as well as of other diseases in children. Primary tuberculosis in early childhood is of potential danger later in the child's life. A school teacher with active tuberculosis will infect many of her pupils. Domestic servants should not take care of children unless they are known to be free from communicable tuberculosis, syphilis or other infectious diseases.

The American Academy of Pediatrics advocates that all adults intimately associated with children should have periodic health examinations. Other health organizations are cooperating in this campaign for "Healthy Workers in the Home."

Discussion opened by E. T. McEnery, Chicago.

"The Organization and Functions of the District Units of the State Department of Public Health." A. C. Baxter, Springfield.

Reasonably good public health service, provided at governmental expense, is now not only expected but demanded by the people. This popular interest is reflected in the public attitude toward epidemic outbreaks of preventable diseases and in the attitude of legislative bodies toward appropriations to health departments and toward laws concerning health matters. This situation has led to greatly increased demands on the State Department of Public Health for services and a greater and greater tendency of the public to hold health authorities responsible for unsatisfactory health conditions. The establishment of district units, the local representation of the State Department of Public Health, was a natural and logical administrative outgrowth of this situation. The organization and functions of these units are described.

Discussion opened by Walter C. Earle, Champaign.

"The Control of Tuberculosis." H. V. Hullerman, Springfield.

1. Reported incidence and mortality of Tuberculosis in Illinois.
2. Facilities for treatment.
3. Relation of facilities to distribution of cases.
4. Present control measures:
   a. Glackin Act.
   b. Recent legislation on Sanatorium Law.
   c. The Illinois Tuberculosis Association.
   d. Illinois Department of Public Health.
   e. Sanatoria.
5. Measures to be stressed in future control:
   a. Sanatoria.
   b. Intensified and cooperative field work.
   c. Education.
   d. Rehabilitation.
   e. Further legislation.

Discussion opened by W. P. Shahan, Springfield.

"Industrial Hygiene in a Public Health Program." M. H. Kronenberg, Chicago.

Industrial hygiene is a public and not merely a class interest. Any public health program to be successful must be rather closely integrated with other public health activities. Whether the program be child hygiene, tuberculosis, venereal

disease, pneumonia control or industrial hygiene, all are striving toward the same ultimate result—better community health. The scope of industrial hygiene is not merely the control and prevention of occupational disease. It is a complete adult health program embracing the whole worker, and is closely interwoven with community health. This service should in no way interfere with the domain of the private physician. The province of industrial hygiene is limited to preventive and not curative medicine. There still remains, however, problems of enormous magnitude among our industrial population which stands as a challenge to public health workers to apply the knowledge and skill now available and to further extend the frontiers of science in the service of health conservation. The various principles of public health and preventive medicine find a very suitable and practical application among the millions of workers in industry under the appropriate title of industrial hygiene.

Discussion opened by A. E. Russell, Chicago.

THURSDAY MORNING, MAY 23, 1940

Meeting of all Sections.

(For complete program and abstracts of papers, See Joint Sessions).

SECTION ON RADIOLOGY

Warren W. Furey .....Chairman
Harry W. Ackemann.....Secretary

TUESDAY AFTERNOON, MAY 21, 1940

1:30—"Unusual Chest Conditions in Children." Arthur Parmelee and Fay Squire, Oak Park.

This report has to do with x-ray findings in the lungs of several children that could not be accurately diagnosed without a careful study of the clinical picture. It concerns particularly, areas of infiltration resembling pneumonia in which no clinical symptoms of pneumonia were seen in the patient. The x-ray signs disappeared spontaneously in a comparatively short time. The difficulties of differential diagnosis are emphasized. The recognition of such conditions is particularly important now that many cases of abortive pneumonia are being seen as a result of the newer methods of therapy.

1:50—"A Few Unusual Anomalies of the Urinary Tract." J. Paul Bennett, Chicago.

Three cases are reported of a solitary congenital cyst in the upper pole of a kidney, the cyst in each case communicating with the renal pelvis and containing stones. Cases are also illustrated of pelvic kidneys and unilateral kidneys and one case of a ureter which divides and re-unites before reaching the renal pelvis. A horseshoe kidney is shown containing a calculus.

Discussion opened by M. J. Hubeny, Chicago.

2:10—"The Importance of Growth Arrest Lines in Radiological Diagnosis and Prognosis." John A. Siegling, Urbana.

Too little emphasis has been placed on lines observed in the roentgenograms of growing children. While in some instances, they may be of academic interest only, there are times when they are of extreme importance in radiological diagnosis and prognosis. The physiology of bone growth is reviewed briefly and the method of formation of lines demonstrated. The diagnostic importance of lines in lead poisoning is stressed, and their prognostic value is illustrated in cases of disease, fractures, tumors and other lesions which involve the epiphyseal cartilage. Lantern slides will be used to illustrate the material.

Discussion opened by Cesare Gianturco, Urbana.

2:30—"Gynecography."

"Gynecography." Ralph A. Reis and Robert A. Arens, Chicago.

Pelvic pneumoperitoneum combined with utero-salpingography clearly visualizes the pelvic status on a Roentgen film. The gas permits organ outlines and relationships to be clearly registered by means of the contrasting gaseous medium. The iodized oil shows the type of uterine cavity, tubal lumens, and the site of possible tubal obstruction. The development of these methods of Roentgen visualization when combined as outlined has been a most useful diagnostic aid in Gynecology. It is a safe and harmless procedure in selected cases and has special value in the diagnosis of obscure and/or disputed gynecologic conditions. The technique, instrumentarium and typical cases will be discussed.

Discussion opened by Robert A. Arens, Chicago; and Fred Decker, Peoria.

2:50—"X-Ray Therapy in Pneumonia." Fred Decker, Peoria.

A study of pneumonia patients entering a moderate sized hospital over a period of two years, will be given. This study will include a list of various types of pneumonia, with particular reference to the type of treatment used. The three methods of treatment, including serum, sulphanilamide and x-ray therapy, will be considered.

Discussion opened by E. E. Barth, Chicago.

3:10—"The High Spots in Bronchiectasis." Perry B. Goodwin, Peoria.

This will be a summary of the etiology, pathology, symptoms, diagnosis and methods of treatment.

Discussion opened by C. D. Sneller, Peoria.

3:30—Case Report—"Carcinoma of the Bladder with Roentgen Films of the Lesions before and after Extensive Deep Radiation Therapy." George M. Landau, Chicago.

3:50—Case Report—"An Interesting and Unusual Gastrointestinal Case with Three Separate and Distinct Lesions." Harry B. Magee, Peoria.

TUESDAY EVENING, MAY 21, 1940

Meeting of all Sections.

(For complete program and abstracts of papers, See Joint Sessions).

WEDNESDAY MORNING, MAY 22, 1940

Meeting of all Sections.

(For complete program and abstracts of papers, See Joint Sessions)

THURSDAY MORNING, MAY 23, 1940

Meeting of all Sections.

(For complete program and abstracts of papers, See Joint Sessions).

SECTION ON PEDIATRICS

H. William Elghammer.....Chairman
Bert I. Beverly.....Secretary

WEDNESDAY AFTERNOON, MAY 22, 1940

"Physiological Changes Incident to Puberty." Frederic T. Jung, Assistant Professor of Physiology, Northwestern University, Chicago.

"Menstrual Disorders During the Adolescent Period." Ralph E. Campbell, Associate Professor Obstetrics and Gynecology, University of Wisconsin, Madison, Wisconsin.

"Obesity in Childhood and Adolescence." L. H. Newburgh, Professor of Medicine, University of Michigan, Ann Arbor, Michigan.

"Educational Problems of Adolescence." Ernest O. Nelby, Ph.D., Dean, School of Education, Northwestern University, Chicago.

SECTION ON OBSTETRICS AND GYNECOLOGY

W. A. Malcolm.....Chairman
Herbert E. Schmitz.....Secretary

"Recent Advances in Gynecologic Endocrinology." J. P. Greenhill, Chicago.

"Organization of Obstetrical Work in Rural Hospitals." Jennings Litzenberg, Minneapolis, Minn.

Discussion opened by Milton E. Bitter, Quincy; O. H. Crist, Danville; W. M. Cooley, Peoria; and R. R. Loar, Bloomington.

(Each discussant allowed ten minutes).

"Toxemia of Pregnancies in the Galesburg Cottage Hospital." Edwin N. Nash, Galesburg.

"Toxemia of Pregnancies at the Cook County Hospital." Chester C. Doherty, Chicago.

"Lactation and Involution." R. R. Loar, Bloomington.

"The Use of Seconal as an Analgesic Agent During Labor." William C. Cummings, Evanston.

PROGRAM ON PATHOLOGY

TUESDAY MORNING, MAY 21, 1940

9:00—"Value of Routine Serological Tests." Victor Levine, Chicago.

Discussion opened by I. Davidsohn, Chicago.

9:30—"Value of Biopsy." Frank B. Queen, Chicago.

Discussion opened by Milton G. Bohrod, Peoria.

10:00—"Clinico-Pathological Conference." Edwin F. Hirsch, Chicago.

11:00—"Organization and Function of Tumor Clinic in Voluntary Hospitals." H. Prather Saunders, Chicago.

Discussion by Bowman C. Crowell, Chicago; John A. Wolfer, Chicago; Roswell T. Pettit, Ottawa; Josiah J. Moore, Chicago.

CENTRAL STATES SOCIETY OF INDUSTRIAL MEDICINE AND SURGERY

Harold A. Vonachen, President.....Peoria, Illinois
Urban E. Gebhard, Vice-President...Milwaukee, Wis.
Frank P. Hammond, Secretary-Treasurer.Chicago, Ill.
Edward C. Holmblad, Program Chairman.Chicago, Ill.

TUESDAY MORNING, MAY 21, 1940

9:30—"Medicolegal Typing of Occupational Disease Cases." (With four illustrative case histories.) C. O. Sappington, Chicago.

The scientific evaluation of etiology, differential diagnosis, and disability furnishes the three variables used to type the medicolegal possibilities of occupational disease cases.

Etiology specifically involves the use of industrial hygiene procedures in the appraisal of employment exposures; differential diagnosis embraces the establishment of cause-and-effect relationships between the industrial environment and the physical and clinical laboratory findings; disability evaluation includes proving that disability is directly caused by an occupational disease.

In Case Type I, the employment exposure was positive, and there was occupational disease with resulting disability.

In Case Type II, the employment exposure was negative, but there was previously existing occupational disease with resulting disability.

In Case Type III, the employment exposure was negative, and there was no occupational disease, but disability was caused by non-occupational disease.

In Case Type IV, there was negative employment exposure, no occupational disease and no disability.

Case history protocols with industrial, medical and medicolegal data are used to illustrate the foregoing types.

10:00—Ten Minute Reports followed by Round Table Discussion as to "The Newer Developments and Present Status of Following Industrial Problems."

"Absenteeism." George W. Stabens, Springfield and James H. Finch, Champaign.

"Physical Examinations." Urban E. Gebhard, Milwaukee, Wisconsin.

"Specific Loss Appraisal." V. S. Cheney, Chicago.

"Hernia." Will Lyon, Chicago.

"Back Injuries." Frederick W. Slobe, Chicago.

"Syphilis in Industry." Paul Palmer, Peoria.

"Economics of Industrial Medicine and Surgery." James A. Valentine and Fred M. Miller, Chicago.

TUESDAY NOON, MAY 21, 1940

12:00—Luncheon.

TUESDAY AFTERNOON, MAY 21, 1940

Joint Session with Section on Surgery.

2:00—"Wound Healing." Michael Mason, Chicago.

Discussion opened by Hilger P. Jenkins, Chicago.

"Treatment of Infected Wounds." David J. Lewis, Springfield.

"Postoperative Thrombosis and Embolism." Geza de Takats, Chicago.

"Treatment of Compound Fractures." William R. Cubbins, James J. Callahan, and Carlo S. Scuderi, Chicago.

"Treatment of Burns." Chester R. Zeiss, Chicago.
(For abstracts of papers, See Section on Surgery.)

PHYSICIANS' ASSOCIATION DEPARTMENT OF PUBLIC WELFARE STATE OF ILLINOIS

George Perkins.....Acting President
J. W. Klapman.....Secretary-Treasurer

TUESDAY MORNING, MAY 21, 1940

9:00—12:00

"Pick's Disease." D. Levitin, Chicago.

This is a study of a 52 year old woman having clinically diagnosed and pathologically verified Pick's Disease. Life situation and other tests are presented demonstrating the course of the disease processes. Encephalographic studies and pathological slides are also presented.

Discussion opened by C. Von Der Heide.

"Comparative Effects of Coma Doses of Insulin Administered Intravenously and Subcutaneously in Psychotic Patients." Irving C. Sherman, John C. Mergener, Abraham A. Low, Chicago.

A comparative study was made of coma doses of amorphous insulin administered subcutaneously and intravenously in psychotic patients. It was found that there was a more rapid response to the latter mode of injection. This was shown by a more rapid drop in blood sugar and a shorter pre-coma period. There was no constant relation between the amount of insulin necessary to produce coma by the two methods of administration.

Discussion opened by G. Heilbrunn, Elgin.

"Juvenile Huntington's Chorea." Eugene Falstein, Theodore F. Stone, Chicago.

A careful study of the known cases of Huntington's Chorea in the Illinois State Hospitals, with particular reference to the Elgin State Hospital, where records dating back more than 35 years have been reviewed, has revealed two cases in which mental and motor symptoms of the disease had definitely appeared before the age of seventeen. Thorough studies, including geneological investigations, are presented, with comments regarding their implications on the generally accepted concepts of the disease.

Discussion opened by R. R. Grinker, Chicago.

"Nitrogen Treatment in Schizophrenia." Carl E. Lengyel, Elgin.

Acute anoxia was produced by pure nitrogen inhalations in several cases of schizophrenia. This was done in order to obtain a state of sympathetic nervous stimulation. The result of this treatment in a series of cases is being discussed and compared with results gained with metrazol and insulin therapy in a similar group of cases.

Discussion opened by I. Finkelman, Chicago.

SYMPOSIUM ON PROBLEMS IN NEUROSYPHILIS

"Cardiovascular and Systemic Morbidity Following Hyperpyrexia in Central Nervous System Syphilis." Alan A. Lieberman, Charles Katz, Elgin.

Studies were made in more than 100 cases of neurosyphilis on the effect of malaria and typhoid vaccine therapy with an evaluation of the cardiovascular and systemic changes resulting therefrom. In view of the drastic nature of malaria treatment, suggestions are made regarding the selection of patients for such therapy and for a modification of typhoid vaccine therapy.

Discussion opened by B. Hilkevitch, Chicago.

"Modification of the Use of Typhoid Vaccine in the Production of Hyperprexia." Jack Weinberg and H. H. Goldstein, Chicago.

This paper reports on experiments on rise of temperature above 103°F. in 84.60% of the 801 times it was used. Modification consists chiefly of the use of smaller doses followed by a larger one at the height of the fever produced by the first injection.

Discussion opened by Francis J. Gerty, Chicago.

"Surgery in Syphilitics with a Study of Cases in Mental Hospitals." George A. Wiltrakis, Anthony V. Partipilo, Louis Olsman, Chicago.

In the consideration of patients for operation, it is desirable to know if the prognosis and the ultimate outcome will be modified by the presence of a syphilitic infection. Will a luetic involvement of the central nervous system affect the prognosis in general surgery? With this prospectus, a study was made in several State Hospitals of the operations performed on patients with syphilis, chiefly cases of general paralysis. Thus, an attempt was made to determine the advisability and prognosis of elective and emergency surgery in this class of patients.

Discussion opened by B. Barker Beeson and William J. Pickett, Chicago.

Role of Neurosyphilis in Disturbances of "Anal Sphincter Tone." (To be read by title.) Bernard L. Greene, Louis H. Block, Elgin.

SECRETARIES' CONFERENCE

A. R. Brandenberger, Chairman.....Danville
A. R. Bogue, Vice-Chairman.....Rochelle
Carl E. Clark, Secretary.....Sycamore

TUESDAY EVENING, MAY 21, 1940

LA SALLE ROOM—HOTEL PERE MARQUETTE

6:00—Dinner Meeting.

"Post Graduate Services for County Medical Societies." Robert S. Berghoff, Chairman, Scientific Service Committee, Chicago.

"How Post Graduate Services for County Medical Societies Can Be Improved." Harold M. Camp, Secretary, Illinois State Medical Society, Monmouth.

"Relationship of the Secretary's Office to the Educational Committee." Charles P. Blair, Member Educational Committee, and Secretary, Warren County Medical Society, Monmouth.

"Participation of Local County Society Members in all Programs of the County." Roswell T. Pettit, Secretary, LaSalle County Medical Society, Ottawa.

Round Table Discussion of Problems of County Secretaries.

H. Prather Saunders, Secretary, Chicago Medical Society, Chicago.

Harlan English, Danville.

A. R. Brandenberger, Secretary, Vermilion County Medical Society, Danville.

William R. Marshall, Secretary, DeWitt County Medical Society, Clinton.

PROGRAM FOR WOMEN PHYSICIANS

The Illinois State Medical Society will be host to the Women Members of the State Medical Society at a dinner in Peoria, Tuesday Evening, May 21, 1940.

The local Chairman of Arrangements is Dr. Margaret B. Meloy of Peoria. Membership tickets in the State Society should accompany requests for reservation.

The following is the tentative Dinner Program:

Short Address—Dr. Elizabeth R. Miner, President Illinois State Branch No. 17 A. M. W. A.

Other addresses by Dr. Nelle S. Noble, Des Moines, Iowa, President A. M. W. A.; Dr. Bertha Van Hoosen, Chicago; Dr. Elizabeth B. Ball, Springfield; Dr. Esther S. Hodel, Morton; Dr. Carolyn N. MacDonald and others.

MEETINGS OF THE HOUSE OF DELEGATES

TUESDAY AFTERNOON, MAY 21, 1940

3:00—First meeting of the House of Delegates called to order by the President, James H. Hutton, for Reports of Officers, Councilors, Committees, Appointment of Reference Committees, Introduction of Resolutions, and for the transaction of other business which may come before the House.

THURSDAY MORNING, MAY 23, 1940

9:00—Second meeting of the House of Delegates called to order by the President for the election of Officers, Councilors, Committees, Delegates and Alternates to the American Medical Association, Reports of Reference Committees and action on same, Action on Resolutions, and for the transaction of other business to come before the House.

PRESIDENT'S DINNER

The Annual Dinner honoring the President of the Illinois State Medical Society, will be held on Wednesday Evening, May 22, at 7:00 o'clock. The dinner will be held in the large Hotel Pere Marquette Ball Room.

Strickland Gilliland

At this 1940 Meeting commemorating the One Hundredth Anniversary of the Society, some special features have been arranged for the President's Dinner. Suitable musical numbers will be presented during and after the service, and as a special attraction, Mr. Strickland Gilliland, noted humorist, columnist, and feature writer of Washington D. C. will give one of his famous addresses on "The Low Down on the Higher Ups in Washington."

The Peoria Committee with Dr. E. E. Nystrom as chairman, will have a large committee making the necessary arrangements, and also for the purpose of selling tickets for this important function and it is hoped that every member who attends the meeting will be present at the Dinner on Wednesday Evening.

(Insert here, the cut of Strickland Gilliland).

VETERANS' SERVICE COMMITTEE DINNER

TUESDAY EVENING, MAY 21, 1940

The annual dinner of the Veterans' Service Committee will be held on Tuesday evening May 21, 1940 at 6:00 p. m.

Dr. F. O. Fredrickson, Chairman of the Committee, will officiate as the presiding officer.

PROGRAM

Call to Order.

1. Presentation of Colors—
   Commander—Peoria Post No. 2.
2. Bugle: To the Colors—
   Carl Steinhoff.
3. "Newer Aspects of Medical Service in War."
   John Dibble, Lieutenant Colonel, Medical Corps, United States Army, Sixth Corps Area.
4. "Americanism."
   Major Leigh N. Bittinger, Department Commander, Department of Illinois, American Legion, Commander Onarga Military Academy.
5. "Remarks."
   Karl A. Gillig, Department Commander, Veterans of Foreign Wars.
6. Moment of Silence.
7. Retirement of Colors.

MATERNAL WELFARE COMMITTEE LUNCHEON

The Maternal Welfare Committee of the Illinois State Medical Society will have its annual luncheon at the Hotel Pere Marquette on Wednesday, May 22, 1940 at 12:00 noon.

The program will consist of a talk by Dr. T. B. Williamson, Mt. Vernon, Chairman of the Committee which will deal with the work in general as carried on by the Committee, and will be illustrated by slides.

Dr. J. E. Litzenberger of Minneapolis, Minnesota will give a fifteen minute talk on the Minnesota Obstetrical Hospital Plan.

Members of the Council, all officers of the State Society, and representatives of the Department of Public Health, State of Illinois will be invited to attend.

Tickets will be on sale at the annual meeting.

ALUMNI LUNCHEONS

NORTHWESTERN UNIVERSITY—COLLEGE OF MEDICINE

The Alumni of Northwestern University College of Medicine will have a luncheon meeting in the Early American Room, Hotel Pere Marquette at 12:00 o'clock on Wednesday noon, May 22, 1940. Dr. George Parker of Peoria and Dr. Walter H. Nadler of Chicago have been responsible for the arrangements.

Tickets will be on sale at the registration booth, and the sale will close at 9:00 o'clock Wednesday morning.

UNIVERSITY OF ILLINOIS—COLLEGE OF MEDICINE

The Alumni Association of the College of Medicine, University of Illinois, has made arrangements for their luncheon to be held on Wednesday noon, May 22, 1940 at 12:00 o'clock noon, in the LaSalle Room of the Hotel Pere Marquette.

Dr. C. H. Phifer of Chicago appointed Dr. W. A. Malcom, assisted by Dr. E. C. Kelly and Dr. K. N. Petri, all of Peoria, to make the local arrangements.

Tickets will be on sale at the registration booth.

ATTENTION—GOLFERS

Dr. James H. Hutton, President of the Illinois State Medical Society, is donating a suitable trophy for the champion golfer, this to be retained by the winner for one year, then to be brought to the meeting on successive years to be played for by the medical golfers.

Dr. Harold F. Diller, Chairman of the Golf Committee for the Centennial Meeting announces that the play will take place on Monday, May 20 at the Country Club of Peoria. The Committee has decided to award the "Hutton Trophy" to the player with the lowest gross score. The play will start at 1:00 P. M., Monday, May 20, and other prizes will be awarded for certain types of handicap play, blind bogeys, etc.

It will be possible for golfers from out of the city to arrange their own foursomes, and for those who have not done so, one or two local golfers will join visiting players to make up foursomes. Plans have been made to hold a dinner for golfers at the clubhouse in the evening, and all members desiring to participate in the golf matches should write to Dr. Diller, addressing him at 410 Main Street, Peoria. The Country Club of Peoria is an eighteen hole course located on Grand View Drive overlooking the beautiful Illinois River, and it is truly a fine course.

There are five eighteen hole golf courses in Peoria all of which will be available to the medical profession during the meeting, and those who are unable to participate in the tournament on May 20, will be permitted to play on other days during the Annual Meeting. Physicians desiring additional information, or who desire to play for the Hutton Trophy, should write to Dr. Diller as early as possible.

ILLINOIS STATE MEDICAL SOCIETY
ONE HUNDREDTH ANNUAL MEETING

Peoria, Illinois

May 21, 22, 23, 1940

WOMAN'S AUXILIARY TO THE ILLINOIS STATE MEDICAL SOCIETY

OFFICERS

MRS. C. C. WINNING, *President*....East St. Louis
MRS. H. J. DOOLEY, *President-Elect*..River Forest
MRS. M. A. NIX, *1st Vice-President*.....Princeton
MRS. A. F. GAREISS, *2nd Vice-President*..Chicago
MRS. D. DICKERSON, *3rd Vice-President*.Danville
MRS. C. C. KANE, *Corresponding Secretary*.....
.....East St. Louis
MRS. V. M. SERON, *Recording Secretary*.....Joliet
MRS. E. G. BEATTY, *Treasurer*.....Pontiac

COUNCILORS

MRS. A. E. McCORNACK, 1st District.....Elgin
MRS. C. R. BATES, 2nd District.....Ladd
MRS. J. P. SIMONDS, 3rd District.....Chicago
MRS. A. H. BRUMBACK, 3rd District.....Chicago
MRS. W. J. WANNINGER, 3rd District....Chicago
MRS. KENNETH C. BAKER, 4th District.Galesburg
MRS. HARRY OTTEN, 5th District.....Springfield
MRS. HAROLD SWANBERG, 6th District..Quincy
Seventh District
MRS. A. F. DIETRICH, 8th District.....Fithian
MRS. E. W. BURROUGHS, 9th District...Ridgway
MRS. C. C. KANE, 10th District.....East St. Louis
MRS. MAT BLOOMFIELD, 11th District....Joliet

CHAIRMEN OF STANDING COMMITTEES

ORGANIZATION—Mrs. H. J. Dooley..River Forest
PRESS & PUBLICITY—Mrs. C. A. Stuart.Oak Park
LEGISLATION—Mrs. Harry Otten.....Springfield
PRINTING—Mrs. William Raim.....Oak Park
PROGRAM—Mrs. C. Otis Smith.....Oak Park
PUBLIC RELATIONS—Mrs. Frank Murphy.....
.....Chicago
REVISIONS—Mrs. R. K. Packard.....Chicago
HYGEIA—Mrs. W. J. Wanninger.....Chicago
FINANCE—Mrs. F. P. Hammond.....Chicago
ARCHIVES—Mrs. Reid Owen Howser....Oak Park
HOSTESS—Mrs. A. H. Brumback.....Chicago
BENEVOLENCE FUND—Mrs. Herbert B. Henkel
.....Springfield
CREDENTIALS & REGISTRATION—Mrs. M. A. Nix .....Princeton

CONVENTION—
Mrs. Milo Easton, *Chairman*.....Peoria
Mrs. John P. Crotty, *Co-Chairman*...East St. Louis

ADVISORY COMMITTEE

DR. CHARLES S. SKAGGS, *Chairman*.....
.....East St. Louis
DR. JOHN R. NEAL.....Chicago
DR. NATHAN S. DAVIS, III.....Chicago
DR. HAROLD M. CAMP.....Monmouth
DR. EDWIN S. HAMILTON.....Kankakee

PARLIAMENTARIAN—Mrs. Lucius Cole.....
.....River Forest

WOMAN'S AUXILIARY PROGRAM

All General Meetings and Social Activities Are Open to All Doctors' Wives.

MONDAY, MAY 20, 1940

1:00-9:00 P. M.
Registration—Pere Marquette and Jefferson Hotels.

TUESDAY, MAY 21, 1940

8:00 A. M. Registration—Pere Marquette and Jefferson Hotels.

10:00 A. M. Pre-convention Board Meeting—Jefferson Hotel. (Board Members Only.)

Mrs. Charles C. Winning, President.

11:00 A. M. "School of Instruction on Auxiliary Activities." Jefferson Hotel. (Open to all doctors' wives.)

Mrs. George Walbright, Presiding.

Mrs. Harry Otten, Co-Chairman.

12:30 Luncheon—Jefferson Hotel, French and Jefferson Rooms. (Open to all doctors' wives.)

Mrs. Charles C. Winning, Presiding.

Mrs. Carl Sibilsky, Local Chairman.

Speakers:

Address of Welcome. Mrs. Orville Barbour.

Convention Announcements. Mrs. Milo Easton.

Address. Mrs. Rollo Packard, President National Auxiliary.

2:00 P. M. General Meeting—Gold Room, Jefferson Hotel. (Open to all doctors' wives.)

Mrs. Charles C. Winning, Presiding.

Invocation. Bishop W. L. Essex, Bishop Quincy Diocese Episcopal Church.

Welcome. Mayor David McCluggage.

Response. Mrs. William Raim.
(Caterpillar Tractors.) (Open to all doctors' wives.)

3:45 P. M. Tour of Holt Manufacturing Company. Cars leaving Liberty Street entrance of Jefferson Hotel.

6:30 P. M. Dinner—Pere Marquette Ball Room, followed by Fashion Revue of private collection from New York and Chicago, with professional models. (Open to all ladies attending the convention.)

WEDNESDAY, MAY 22, 1940

8:00 A. M. Registration—Pere Marquette and Jefferson Hotels.

8:00 A. M. Board Breakfast. (Board Members Only.)

9:15 A. M. Busses leave for Breakfast—Peoria Country Club. (Open to all doctors' wives.)

9:30 A. M. General Meeting—Ball Room, Jefferson Hotel. (Open to all doctors' wives.)

Mrs. Charles C. Winning, Presiding.

Memorial Services. Mrs. Orville Barbour, Chairman.

Scripture and Prayer. Mrs. A. A. Knapp.

Solo—Prayer Perfect (Malotte). Mrs. Clarence Magaret.

In Memoriam.

Memorial Roll Call.

Candle Light Service.

Remembrance Flowers. Mrs. Orville Barbour.

Solo—Lord's Prayer (Stenson). Mrs. Clarence Magaret.

"Taps" (All stand in memory.) Mrs. Clarence Magaret.

12:00—Return from Country Club Breakfast.

12:45—President's Luncheon, French and Jefferson Room, Jefferson Hotel.

Mrs. Charles C. Winning, Presiding.

Mrs. Allen Foster, Local Chairman.

Announcements. Mrs. Milo Easton, Convention Chairman.

Speakers: (To be announced later.)

Followed by Mrs. E. C. Kelly, Chairman (Reception.)

3:30 P. M.—Post Convention Board Meeting. (Board Members Only.)

Mrs. H. J. Dooley, Presiding.

5:00 P. M.—Open House held by Peoria doctors and their wives. (Open to all doctors and their wives attending the convention.)

Indicate at time of registration if you wish to attend open house and also if you have already been asked. If not, Hostess Committee will arrange for you.

7:00 P. M.—President's Dinner Dance.

SOCIAL FUNCTIONS FOR ALL LADIES

TUESDAY, MAY 21, 1940

12:30—Luncheon—Jefferson Hotel, French and Jefferson Rooms.

2:00 P. M.—Tour of City for ladies not attending Auxiliary activities.

3:45 P. M.—Tour of Holt Manufacturing Company. (Caterpillar Tractors.) (Cars leaving Liberty Street entrance of Jefferson Hotel.)

6:30 P. M.—Dinner—Pere Marquette Ball Room, followed by Fashion Revue.

WEDNESDAY, MAY 22, 1940

9:15 A. M.—Busses leave for Breakfast—Peoria Country Club. (Busses leave Main Street entrance of

Pere Marquette Hotel, and Fulton Street entrance of Jefferson Hotel.)

12:00—Return from Country Club Breakfast.

12:45—President's Luncheon, French and Jefferson Room, Jefferson Hotel.

5:00 P. M.—Open House held by Peoria Doctors and their wives.

7:00 P. M.—President's Dinner Dance.

SCIENTIFIC EXHIBITS

SHRINE MOSQUE

Frank J. Jirka, Chairman.....Chicago
Nathan Smith Davis, III, Director of Exhibits .....Chicago

Booth 1. "Ectopic Pregnancy." Frederick H. Falls, Miss Charlotte S. Holt, Illinois State Department of Public Health, and University of Illinois College of Medicine, Chicago.

A series of ten bas-relief models cast in special plaster composition and painted in natural colors, depicting various types of ectopic pregnancy, such as interstitial, ovarian, isthmic, ampullary and escondary abdominal, a colpocentesis of a pelvic hematocele, broad ligament hematoma, a fibroid uterus causing compression of tube, and bilateral tubal pregnancy. A model showing the story of normal fertilization and nidation and sites of ectopic implantation. These will be types of ectopic pregnancy as seen at operation by the surgeon. Lettered charts outlining etiology, diagnosis, treatment and mortality statistics will be added. Photomicrographs of each type will show as transparencies, and a unique x-ray picture of a ruptured interstital ectopic pregnancy with a baby weighing five pounds, will be shown.

Booth 2. "Cerebral Manifestations in the Newborn." Abraham Levinson, Cook County Hospital, Chicago.

A series of charts outlining the etiology, symptomatology, and treatment of Cerebral Manifestations of the Newborn, including anoxemia, cerebral agenesis, acute infections, tetany and hypoglycemia. The exhibit will also include lantern slides and specimens.

Booth 3. "The Neurocirculatory Clinic. Its Scope and Material." Geza deTakats, William C. Beck, Joseph H. Jesser, Donald Miller, P. J. Sarma, University of Illinois College of Medicine.

Instead of separating patients in medical, surgical, orthopaedic, and neuro-phychiatric clinics, it is the doctors that are grouped around the patient. As a general principle, a synthesis of knowledge is emphasized instead of a fragmentation by overspecialization. This is demonstrated on five disease entities, namely: congenital vascular anomalies, varicose veins, peripheral vascular disease, hypertension, pulmonary embolism.

In each group the diagnostic methods, the types of treatment and the results are shown by charts, drawings, photographs and individual case histories. Such a group-study improves diagnosis, accumulates material for undergraduate and postgraduate teaching and stimulates clinical research.

Booth 4. "Segmental Retrograde Sclerosis in the Treatment of Leg Varices." James Graham, Springfield Clinic, Springfield.

Models and translites illustrate four classes of leg varices, bases on valvular competency. Saphenous vein ligation, combination with retrograde injection of sclerosing substance, is advocated for those classes in which valvular incompetency plays a major role. In this connection, segmental retrograde sclerosis by the ureteral catheter method.

Booth 5. "Peripheral Vascular Diseases." G. H. Marquardt, T. R. VanDellen, R. C. Roberts, S. Perlow, and Nathan S. Davis, III, Florsheim Clinic, Northwestern University College of Medicine, Chicago.

Results of management of those with peripheral arteriosclerosis and thrombo-angiitis obliterans and those with vasospastic arterial disease over a period of eight or ten years. Plethysmographic studies before and after various types of therapy.

Booth 6. "Avitamosis in the Alcoholic." Don C. Sutton and John Ashworth, Northwestern University College of Medicine, Chicago.

The exhibit will consist of charts, color transparencies and still projection of color transparencies. The charts will be descriptive of especially the neuritis and pellagra lesions. A chart of the vitamins involved, and an outline of treatment.

Booth 7. "Clinical Cystometry. Presentation of a New Cystometrograph." Herbert E. Landes and Harold C. Voris, Departments of Urology and Neurosurgery, Loyola University College of Medicine, Mercy Hospital and Loyola Clinics, Chicago.

Exhibit consists of photograph of cystometrograph in operation. Model of instrument itself. Twenty-six charts showing a wide variety of tracings obtained in different neurologic lesions together with a chart showing innervation of bladder and urethra and finally a printed chart summarizing the content of the exhibit.

Booth 8. "Posture Plays an Important Part in the Physical Therapy of Bed and Convalescent Patients." American Physiotherapy Association, Miss M. C. Winters, Chicago.

Six posters, 22 x 28 inches with photographs showing the following: Good and bad posture of an arthritic in bed with a view to preventing the following deformities—poor chest posture affecting vital capacity, forward head, knee flexion contractures, adduction and inward rotation of shoulders, adduction and external rotation of legs, foot drop and wrist drop;

Poor posture in a wheel-chair showing swelling, in a lower leg and the correction;

Instruction to a fracture case in a walker to precede instruction in walking with crutches;

Instruction in crutch-walking to a fracture case showing crutches of incorrect length poorly placed, and soft shoes with corrections.

Booth 9. "Disease of the Lung." E. J. Kraus and H. M. Pollak, St. Francis Hospital, Peoria.

Pathological specimens of various lung diseases; histological photographs, case histories and x-ray films.

Booth 10. "Pulmonary Tuberculosis. Diagnosis and Treatment by Surgical Collapse." Municipal Tuberculosis Sanitarium, Chicago.

Four illuminated cabinets demonstrated by x-ray films and pathologic specimens, pulmonary tuberculosis in all stages of the disease.

Collapse treatment and the results obtained by pneumothorax and surgical procedures.

Booth 11. "End Results in Pulmonary Tuberculosis." Jerome R. Head, Edward Sanatorium, Naperville.

This exhibit will consist of printed charts and tables showing the five-year end results in 500 cases of pulmonary tuberculosis. There will be slides also showing the results of the various types of cases.

Booth 12. "The Useful Power Output of Short Wave Therapy Generators." Eugene Mittelmann and H. J. Holmquist, Northwestern University, Chicago.

The power output of a short wave therapy generator, which can be converted into heat in the body of the patient, is only a fraction of the power which is measured by lamp loads and is usually claimed as the available output of the generator. Exposition and demonstration of simple high frequency watt meter for measurement of power actually absorbed by the patient. Presentation of data showing correlation between heating in deep tissue and wattage absorbed. Evaluation of different types of short wave generators on the basis of their thermal effectiveness.

Booth 13. "Aerobiology as Applied to Allergy." Oren C. Durham, Abbott Laboratories, North Chicago.

Apparatus and methods used and results obtained in 350 uniform seasonal atmospheric surveys (1925-1939) and 400 upper air tests of pollens, fungus spores and insect particles. Most of the work has been done in the United States, Alaska and Canada (cooperation of United States Weather Bureau and Canadian Meteorological Service). Limited data for Cuba, Mexico, Argentina and Japan. Maps, Tables and Graphs, including new "ragweed pollen index" of North America. Technique of identification and counting will be demonstrated. A reference collection of 400 pollen and fungus spore specimens will afford abundant opportunity for practice.

Booth 14. "Serum as Substitute for Blood in Transfusions." S. O. Levinson, H. Necheles, F. Neuwelt, Michael Reese Hospital; Samuel Deutsch, Serum Center and Department of Gastro-Intestinal Research; Chicago.

Pictures, charts, graphs, tables, hymograph records and short explanatory descriptions of experiments proving the practicability and advantages of serum versus blood transfusion. Pictures of bleeding of donors and of processing of serum and its preparation for storage, transportation and transfusion. Charts of serum transfusion in patients. Complete paper appeared in A.M.A. Journal of February 10, 1940.

Booth 15. "Occupational Hazards." Department of Public Health, State of Illinois. A. C. Baxter, Director.

Industrial Hygiene Exhibit consisting of:
(1) Industrial Lead Poisoning.
(2) Occupational Anemias.
(3) Dust Diseases in Industry.

Booth 16. "Disease of the Thyroid Gland." Arnold S. Jackson, The Jackson Clinic, Madison, Wisconsin.

Models and charts on diagnosis and treatment of cretins. Maps, charts, showing growth of cretinism and distribution of the 500 cases reported in the United States. Colored illustrations showing technique of thyroidectomy by electro-surgery for exophthalmic goiter. Colored illustrations and models of the various types of goiter, their distinguishing characteristics, and the methods of treatment. Illustrations, charts and data on hypothyroidsim and myxedema illustrating typical and atypical cases, signs, symptoms, methods of treatment and results. Moving pictures of cretins, diagnosis of various types of goiter and the technique of thyroidectomy.

Booth 17. "The Minutemen of American Medicine." The National Physicians Committee for the Extension of Medical Service.

Photostats of Propaganda Material favoring political regimentation of medical practice, and of editorials, news items, etc., regarding the activities, aims and objectives of the Committee.

Copies of material prepared to educate the public as to the accomplishments of a free American Medical Profession.

Copies of an illustrated edition of "Priceless Heritage" will be included.

Booth 18. "Treatment of Seminal Vesiculitis by Transurethral Catheterization and Dilation of the Ejaculatory Ducts." Robert H. Herbst and James W. Merricks, Urological Department, Rush Medical College, University of Chicago, and Presbyterian Hospital, Chicago.

Transparent postmortem specimens showing seminal vesicles injected with red lead and cleared by the Spalteholtz method. X-Ray films showing clinical pathologic changes in the vesicles and the results.

PERE MARQUETTE HOTEL

Booth I. "Technique of Subtotal Thydroidectomy Under Local Anesthesia." David A. Bennett, Coleman Clinic, Canton.

Demonstration of technique used in subtotal throidectomy by use of local anesthesia. Demonstrated by drawings and colored paintings of the various steps or stages of the operation. Colored movies are also used in the booth which show technique of the operation.

Booth II. "Plastigut—A New Suture Development." Joseph E. Bellas, The Collins Clinic, Peoria.

A comparative study of suture reactions with current sutures and Plastigut. A new classification of sutures is brought forth as a basis for future evalution of sutures. Plastigut is a new suture of which plastics are the essential components. Plastigut is supported by extensive, experimental, clinical and microphotographic studies and is offered to the surgical profession as an approach to the ideal suture.

Booth III. "What Radiation Technique Gives the Best Clinical Results in Uterine Cervical Cancer?" Harold Swanberg, Quincy X-Ray and Radium Laboratories, Quincy.

Exhibit will consist of charts showing the results obtained and the techniques of radiation being used at the leading radio-therapeutic centers of the world in the treatment of uterine cervical malignancy.

Booth IV. "The Tumor Clinic in the Small Private Hospital." Ravenswood Hospital Tumor Clinic, H. P. Saunders, Ravenswood Hospital, Chicago.

An exhibit demonstrating the method of establishing a tumor clinic in a small private hospital. The method of conducting the clinic and advantages of the clinic to patients, physicians and the hospital.

(a) Exhibit includes charts showing activities of the clinic such as examining, diagnosing and outlining treatment of tumor cases.

(b) Demonstration of cases and specimens before staff members.

(c) Perfection of a follow-up system.

Booth V. "Hemangiomas (Birthmarks)." Frank E. Simpson, Chicago.

Color motion picture of cases treated and technique. Photographs of cases.

Booth VI. "Surgical Pathological Studies of Carcinoma of the Rectum and Colon." R. K. Gilchrist, Rush Medical College, Presbyterian Hospital, Chicago.

This exhibit is a summary of the findings in 125 surgical specimens. The distribution of metastases to the 7000 lymph nodes examined microscopically from these specimens is shown by charts, specimens and illustrations. The results of experimental studies on the manner of spread of carcinoma through the lymph system, are shown. Specimens and charts demonstrate the perforation of diverticula in the presence of carcinoma. The effect of size of tumor, duration of symptoms, grade of tumor, age and sex of patient are shown in their relation to lymphatic metastases.

Booth VII. "Acute Appendicitis." William Kleitsch, R. B. Malcolm, L. J. Rossiter, Warren H. Cole, Department of Surgery, University of Illinois College of Medicine, Chicago.

About six models illustrating the stages of inflammation incident to acute appendicitis with and without perforation. One or two drawings to illustrate dangers incident to catharsis. Several placards supply information regarding incidence, therapy, etc.

Booth VIII. "Controlled Evaporation of Liquid Oxygen. A New and Simple Method of Production of Oxygen Gas at the Bedside." John A. Mathis, and Mr. Roland Milan, Pinckneyville.

Apparatus measures 28 inches diameter by 40 inches in height. No cylinders are used, but liquid oxygen in standard commercial 25 liter container supplies the source of the gas. The apparatus comprises a method of returning liquid oxygen to the gaseous state at any rate of speed desired, under complete control of the operator, together with safety measures which make the apparatus safer than cylinders of the gas under pressure.

This idea and its execution are entirely new, and have not been demonstrated elsewhere. By its use, it is possible to use 6 liters of oxygen per minute at a cost of about 5c per hour. In cylinders, the cost is from 15 to 30 cents per hour. We have tried out the apparatus for two years, and it has no faults or dangers.

Booth IX. "Implantation of the Ureter into the Colon for Exstrophy of the Urinary Bladder. Ureterointestinal Anastomosis." Roy E. Brackin, Rush Medical College, University of Chicago, Department of Surgery, Chicago.

The exhibit consists of photographs of patients before and after transplantation of the ureters to the colon and roentgenological studies, blood findings, clinical reactions and end results up to one year after bilateral ro-signoidal anastomosis in the treatment of extrophy of the urinary bladder. One successful case of twenty years is presented with complete charts of pre- and post-operative blood and urinary tract studies up to one year after operation including bilateral transplantation of the ureters and total cystectomy, one case of three years of age. This method of procedure will be shown by drawings. This was shown in the scientific exhibits of 1939 and the experimental results demonstrated. The present exhibit presents the results in a small number of cases, among whom there were no deaths following the operation. A motion picture in color of the procedure will be shown. This film is about 300 feet.

Booth X. "Liver Disease." Max Schneider and Sidney A. Portis, Michael Reese Hospital, Chicago.

This exhibit will give the clinical approach to the treatment of liver disease, the significance of liver function tests, and the type of tests most suited for the average clinician to use. The charts will show the course of the clinical picture of patients with hepatic disease and the therapy will be carefully outlined.

Booth XI. "Gall Bladder Disease. The Gall Bladder Study Group of Michael Reese Hospital." Heinrich Necheles, Sidney A. Portis and Ralph Bettman, Michael Reese Hospital, Chicago.

The exhibit will show the physiologic, medical and surgical aspects of gall bladder disease with a discussion of the various types of work done in the Department of Physiology relative to the gall bladder. The medical pre- and post-operative management of gall bladder disease will be discussed. The surgical aspect will show the results of the surgical approach to the problem of bile tract disease, the indications for surgery, the types of incisions and the mortality and morbidity statistics all of which will be amply illustrated.

Booth XII. "Plastic and Reconstructive Surgery." Paul W. Greeley, University of Illinois College of Medicine, Department of Surgery, Division of Plastic Surgery, Chicago.

An exhibition of representative cases in photograph demonstrating a wide variety of plastic problems, together with the results obtained. Each case will be briefly discussed by suitable legends or diagrams. On another card will be noted existing axioms of plastic surgery pointing out certain of the more common principles in this field.

Booth XIII. "Allergy of the Nose and Sinuses. Interesting Microscopic Sections from the Temporal Bone." Daniel Hayden, Elmer Hagens, George E. Shambaugh, Jr., Linden Wallner and Paul A. Campbell, Department of Otolaryngology, Rush Medical College, University of Chicago, Chicago.

The exhibit presents enlarged Kodachrome Photomicrographs of various interesting sections taken through the temporal bone. The second part of the exhibit is of various enlarged Kodachrome photomicrographs demonstrating the microscopial changes produced by allergy of the nose and sinuses.

TECHNICAL EXHIBITORS AT THE 1940 ANNUAL MEETING

Abbott Laboratories, North Chicago, Illinois.
A. S. Aloe Company, St. Louis, Missouri.
American Hospital Supply Corporation, Chicago.
Arlington Chemical Company, Yonkers, New York.
Bard Parker Company, Inc., Danbury, Connecticut.
W. D. Bates, Rockford, Illinois.
Bilhuber-Knoll Corporation, Orange, New Jersey.
The Borden Company, New York, N. Y.
Ciba Pharmaceutical Products, Inc., Summit, New Jersey.
The Coca-Cola Company, Atlanta, Georgia.
Curvlite Products, Inc., New York, N. Y.
Davies, Rose & Company, Limited, Boston, Massachusetts.
F. A. Davis Company, Philadelphia, Pennsylvania.
DePuy Manufacturing Company, Warsaw, Indiana.
Doho Chemical Corporation, New York, N. Y.
Eli Lilly and Company, Indianapolis, Indiana.
H. G. Fischer & Company, Chicago, Illinois.
C. B. Fleet Company, Lynchburg, Virginia.
General Electric X-Ray Corporation, Chicago, Illinois.

Gerber Products Company, Fremont, Michigan.
Hamilton-Schmidt Surgical Company, St. Louis, Missouri.
The G. F. Harvey Company, Saratoga Springs, N. Y.
H. J. Heinz Company, Pittsburgh, Pennsylvania.
Horlick's Malted Milk Corporation, Racine, Wisconsin.
Jones Metabolism Equipment Company, Chicago, Illinois.
The "Junket" Folks, Little Falls, New York.
Lederle Laboratories, Incorporated, New York, N. Y.
Libby, McNeill & Libby, Chicago, Illinois.
J. B. Lippincott Company, Philadelphia, Pennsylvania.
A. E. Mallard, Detroit, Michigan.
Mead Johnson and Company, Evansville, Indiana.
Medical Arts Supply Company, Chicago, Illinois. (Lepel High Frequency Laboratories.)
The Medical Protective Company, Wheaton, Illinois.
Mellin's Food Company, Boston, Massachusetts.
The Mennen Company, Newark, New Jersey.
M & R Dietetic Laboratories, Inc., Columbus, Ohio.
The C. V. Mosby Company, St. Louis, Missouri.
V. Mueller and Company, Chicago, Illinois.
Park, Davis & Company, Detroit, Michigan.
Pet Milk Sales Corporation, St. Louis, Missouri.
Petrolagar Laboratories, Inc., Chicago, Illinois.
Philip Morris & Company, Ltd., Inc., New York, N. Y.
W. B. Saunders Company, Philadelphia, Pennsylvania.
Schering Corporation, Bloomfield, New Jersey.
Otto Schweinberger & Company, Moline, Illinois.
Sharp & Dohme, Incorporated, Philadelphia, Pennsylvania.
S.M.A. Corporation, Chicago, Illinois.
Smith, Kline & French Laboratories, Philadelphia, Penna.
E. R. Squibb & Sons, New York, N. Y.
Standard X-Ray Company, Chicago, Illinois.
Frederick Stearns & Company, Detroit, Michigan.
Sutliff and Case Company, Inc., Peoria, Illinois.
White Laboratories, Inc., Newark, New Jersey.
John Wyeth & Brother, Inc., Philadelphia, Pennsylvania.
X-Ray Equipment Company, Chicago, Illinois.
The Zemmer Company, Pittsburgh, Pennsylvania.

NOTES ON TECHNICAL EXHIBITS

ABBOTT LABORATORIES—Booth 46

You are heartily invited to inspect the comprehensive selection of pharmaceutical specialties on display including large volume Intravenous Solutions, Metaphen, Vitamins, Procaine, Ephedrine and Pollen products. Nembutal and Pentothal Sodium, the new intravenous quick-acting short-duration anesthetic will also be featured.

Please feel free to discuss the newer products with the Abbott-trained representatives in attendance.

A. S. ALOE COMPANY—Booth 26

A. S. Aloe Company of St. Louis will display a complete general line of physicians' instruments, supplies and equipment. Aloe Steeline, the improved design in treatment room furniture, will be featured, also the Aloe Diagnostic X-Ray. The display will be in charge of Aloe representative, Val H. Drennan.

AMERICAN HOSPITAL SUPPLY CORPORATION—Booth 29

Interesting new procedures in blood transfusion by the indirect method simplified to an amazing degree and made almost foolproof, will be demonstrated. The latest news on making and the handling of plasma, blood banking, and the use of intravenous fluids, will be available to you also. Several interesting new specialties that promote better patient care will be demonstrated for the first time. You will be cordially welcomed at booth 29.

THE ARLINGTON CHEMICAL COMPANY—Booth 12

The Arlington Chemical Company invites you to inspect their line of Proteins and Pollens for diagnosis and treatment of allergic conditions. And their new product—AMINOIDS. Aminoids represents a combination of amino acids and has proved of marked therapeutic value in malnutrition, underweight and loss of appetite.

Dr. L. A. Kitzman, in charge of the exhibit, will be happy to answer inquiries regarding this new product; also inquiries relative to hayfever, asthma, etc.

BARD PARKER COMPANY, INC.—Booth 44

Bard Parker will exhibit the following products: Rib-Back surgical blades, Renewable Edge scissors, Hematological Case for obtaining blood samples at the bedside, Ortholator for obtaining accurate dental radiographs, Formaldehyde Germicide and Instrument Containers for the rust-proof sterilization of surgical instruments.

W. D. BATES—Booth

Fracture Equipment

BILHUBER-KNOLL CORPORATION—Booth 45

We, the Bilhuber-Knoll Corporation, welcome you. Here you will again meet Mr. Kidwell and Mr. Murbach who are ably prepared to answer questions regarding Dilaudid, Metrazol, Theocalcin, and other N.N.R. products of our manufacture. They will also be glad to acquaint you with our policy relating to the production in our Orange, N. J. plant of "original medicinal chemicals" which merit your continued daily use and your endorsement.

THE BORDEN COMPANY—Booth 10

Full information on BIOLAC, the new *liquid* modified milk for infants, will be available at the Borden Booth.

Also exhibited will be other Borden products for infant feeding, notably Klim, Dryco, Beta Lactose, Merrell-Soule products, and Borden's Irradiated Evaporated Milk.

CIBA PHARMACEUTICAL PRODUCTS, INC.—Booth 24

Ciba Pharmaceutical Products, Inc., will feature their well-known line of specialties, including Coramine, Nupercainal, Digifoline, Trasentin, etc. Latest information, literature and reprints of recent papers by outstanding endocrinologists and investigators will be available describing Perandren and Di-Ovocylin and their clinical application where androgenic and

estrogenic therapy is indicated. Representatives of the firm will be in attendance and will be glad to answer any questions in regard to the products displayed.

THE COCA-COLA COMPANY—Booth 20

The Coca-Cola Company will be host to the doctors calling at their booth, and Coca-Cola will be served for the pause that refreshes.

CURVLITE PRODUCTS, INC.—Booth 53

DAVIES, ROSE & COMPANY, LIMITED—Booth "C"

Davies, Rose & Company, Limited, Boston, Mass., hope that you will visit their headquarters. The preparations that this firm is exhibiting have a world-wide reputation. Physiological or chemical tests are made to assure their standardization. Clinical experience vouches for their dependability.

Mr. G. L. Cunningham will be at the booth to welcome you.

F. A. DAVIS COMPANY—Booth 25

Be sure to visit booth 25 and examine our most recent publications such as Lederer—Ear, Nose and Throat; Bland & Montgomery—Practical Obstetrics; Reimann—Treatment in General Medicine; Stroud—Diagnosis and Treatment of Cardiovascular Disease; Piersol—The Cyclopedia of Medicine; Bland—Gynecology; Smith—proctology for the General Practitioner; Robertson—Diagnostic Signs, Reflexes and Syndromes. F. A. Davis Company.

DePUY MANUFACTURING COMPANY—Booth 14

DePuy Manufacturing Company will exhibit for your consideration, Fracture Appliances to be used by the exacting and careful surgeon. Bone Screws, Bone Plates, Screw Drivers, the new White Type Sterilizing Screw Rack, Friddle Screw Driver, White Type Mortising Chisel, and the improved Lovejoy Drill will be on display. We will have a complete line of Splints for your consideration.

We want you to appreciate the fact that you can come into our Booth and feel at home and there will be no high pressure methods used. Mr. James Rippey will be in charge of this Exhibit, and he is amply able to care for your needs.

THE DOHO CHEMICAL CORPORATION—Booth 21

The Auralgan Exhibit consists of a model of the human auricle four feet high together with a series of twenty-four three dimensional ear drums, modeled under the supvervision of outstanding otologists. Each of these drums depicts a different pathologic condition based upon actual case observation, and prepared in so far as possible, with strict scientific accuracy so as to be highly instructive and interesting to all physicians.

As the observed looks into the large ear through a proportionately sized speculum, the ear drums appear successively within the canal so as to similate actual conditions seen in life. The successive changes of the ear drums are affected by automatic mechanism, and accompanied by a brief description of the condition.

This is the first time that such a complete modeling of ear drums has ever been executed in this scale.

ELI LILLY AND COMPANY—Booth 6

Eli Lilly and Company produced the first commercial preparation of Insulin, contributed to development of liver therapy, and has been responsible for many other therapeutic advancements. Products of importance in routine practice will be displayed.

H. G. FISCHER & COMPANY—Booth 23

H. G. Fischer & Company will display 1940 models of x-ray and short wave apparatus which are so distinctive that every physician should consider inspection a convention obligation. The complete H. G. Fischer & Company line includes shockproof x-ray apparatus, short wave units, combination cabinets, galvanic and wave generators, ultra violet and infra-red lamps and many other units, accessories and supplies.

Physicians attending the convention are invited to ask for demonstrations of apparatus in which they are interested and to consult with FISCHER representative regarding technics made available by FISCHER APPARATUS.

C. B. FLEET COMPANY—Booth 43

PHOSPHO-SODA (FLEET), a saline laxative, has been presented to the Medical Profession for over fifty years. This eliminant is suggested when a rapid non-griping action is desired. It is recommended in gall bladder disorders.

The profession is cordially invited to visit the booth of the C. B. Fleet Company, Inc.

GENERAL ELECTRIC X-RAY CORPORATION—Booth 55

Each year the General Electric X-Ray Corporation endeavors to develop for the profession, new and better x-ray and electromedical apparatus.

A visit to the G-E exhibit will prove most helpful to you, whether you are planning for a new installation or the modernization of your present electromedical facilities.

GERBER PRODUCTS COMPANY—Booth 35

Ten new foods which have just been added to the Gerber Baby Foods, will be on display in the Gerber Booth.

Copies of both the professional literature and the booklets for mothers are there for your examination and will be sent to you upon request.

HAMILTON-SCHMIDT SURGICAL COMPANY—Booth 28

The Hamilton-Schmidt Surgical Company of St. Louis has an exhibit at this meeting of the Illinois State Medical Society to exhibit and demonstrate Burdick Physio-Therapy apparatus. They expect to show an interesting collection of genuine Stille stainless steel Swedish instruments. The new improved Safti-Flask of the Cutter Laboratory Dextrose solutions. You are invited to visit this exhibit.

THE G. F. HARVEY COMPANY—Booth 17

The G. F. Harvey Company, one of the oldest manufacturing concerns in the country, recently assumed the distribution of the Chappel organogenates manufactured by the Chappel Laboratories of Rockford, Illinois. These products include the well known gonadotropic hormone, Prephysin, as well as the widely used liver preparations. These items are splendid supplements to the complete line of pharmaceuticals, including all types of ampule medications, manufactured by the Harvey Company. Physcians are also invited to check the product—Harvoglobin, the liver tonic in which the liver cannot be tasted.

Kindly have a Harvey representative explain to you the background of these noteworthy products.

H. J. HEINZ COMPANY—Booth 39

Physicians interested in prescribing for the feeding—especially of infants, older children or adults requiring soft diets, will be interested in the new Heinz exhibit where Strained and Junior Foods are attractively displayed. Mr. J. P. Dermody is in attendance and will be happy to supply information on these foods.

The eighth edition of the popular Heinz Nutritional Charts, containing greatly expanded charts and new data on vitamin content of foods, is ready and will be mailed on request.

HORLICK'S MALTED MILK CORP.—Booth 11

Nourishing, digestible, appetizing—these are the three outstanding qualities for which HORLICK'S is famous, whether in powder or tablet form. Visit the exhibit booth. You will be interested in the many uses from infant feeding to old age—note especially the convenience of the Tablets in ulcer diets.

JONES METABOLISM EQUIPMENT CO.—Booth 5

The "Jones Metabolism Equipment Company" will feature as their display, the Jones MOTOR BASAL Metabolism apparatus.

A special feature of this unit is that it contains no water, and requires no calculation in the determination of the basal metabolic.

"THE 'JUNKET' FOLKS"—Booth 52

"The 'JUNKET' FOLKS," Chr. Hansen's Laboratory, Inc., Little Falls, N. Y. will exhibit at this year's annual meeting. Graduate dietitian in attendance at the exhibit. Free servings of rennet-custards made with "Junket" Rennet Powder and "Junket" Rennet Tablets.

Authoritative literature describes the action of rennet enzyme on milk and the place of rennet-custards in the diets of convalescents, post-operative cases, invalids, infants, children, etc. There will be a display of "Junket" Brand Food Products.

LEDERLE LABORATORIES, INC.—Booth 22

Lederle Laboratories, Inc. will display all types of specific Antipneumococcic Sera as well as Sulfapyridine and Sodium Sulfapyridine, the comparatively new drugs used in the treatment of pneumonia.

We will also present our line of Globulin Modified Antitoxins and pharmaceutical specialties with particular reference to the high potency of Vitamin B Complex and the Bellabulgara Tablets which are receiving such wide spread acceptance in the treatment of Parkinsonism. All physicians are extended a cordial invitation to visit the Lederle booth.

J. B. LIPPINCOTT COMPANY—Booth 8

Among the interesting Lippincott publications on display will be Kugelmass': "Newer Nutrition in Pediatric Practice" and Becker and Obermayer's: "Modern Dermatology and Syphilology." Of similar importance is "Functional Disorders of the Foot" by Dickson and Diveley which has gone into a second printing within five months of publication. Other interesting works include Thorek's: "Modern Surgical Technic," Rigler's: "Outline of Roentgen Diagnosis," Barborka's: "Treatment by Diet" and many others.

A. E. MALLARD—Booth "B"

A. E. Mallard, Manufacturing chemist of Detroit, Michigan, will have a display of modern pharmaceutical products which are in keeping with the present trend of medical therapy. These products are manufactured under strict laboratory control. They are guaranteed to be true to label and of reliable potency, and are the result of knowledge gained in 29 years of experience in pharmaceutical research and manufacturing.

Dan L. Hovis and Charles B. Stoltz, representative, will be on hand to welcome you.

M & R DIETETIC LABORATORIES, INC.—Booth 36

M & R Dietetic Laboratories, Inc., Columbus, Ohio, will display Similac and powdered SofKurd.

Representatives will be glad to discuss the merits and suggested application of these products.

MEAD JOHNSON & COMPANY—Booth 42

Mead Johnson & Company will exhibit several new products in addition to Dextri-Maltose, Pablum and Oleum Percomorphum.

They will also have on display various examples of their slogan "SERVAMUS FIDEM"—We Are Keeping the Faith.

MEDICAL ARTS SUPPLY COMPANY LEPEL HIGH FREQUENCY LABORATORIES, INC.,—Booth 30

The merchandise we expect to display will consist of one set of physician's examining furniture; three pieces of Lepel High Frequency apparatus; an infra red lamp; an ultra violet lamp; assorted surgical instruments and specialties.

THE MEDICAL PROTECTIVE COMPANY—Booth 27

The Medical Protective Company's representative, thoroughly trained in Professional Liability underwriting, invites you to visit our exhibit booth. He is entirely familiar with the principles of the reciprocal rights and duties of a doctor and patient and with the circumstances peculiar to that relationship.

He will be glad to explain how his Company meets the exacting requirements of adequate liability protection, which are peculiar to the Professional Liability field.

MELLIN'S FOOD COMPANY—Booth 40

Members of the Illinois State Medical Society are cordially invited to call at our booth for an exchange of ideas and opinions relative to the feeding of infants and in regard to the preparation of nourishment for adults requiring a restricted diet, particularly in view of the recognized importance of selecting food material best adapted to the individual requirements.

THE MENNEN COMPANY—Booth 16

The Mennen Company will exhibit their two baby products —Antiseptic Oil and Antiseptic Borated Powder. The Antiseptic Oil is now being used routinely by more than 90% of the hospitals that are important in maternity work.

Be sure to register at the Mennen exhibit and receive your kit containing demonstration sizes of their shaving and aftershave products; also, for the lucky number prize drawing to be held at the close of the convention, for DeLuxe Fitted Leather Toilet Kits.

THE C. V. MOSBY COMPANY—Booth 37

Doctors attending the Illinois State Medical Society are cordially invited to visit the Mosby Booth—there to inspect the new publications which will be on display.

Outstanding new volumes on surgery, allergy, dermatology, operative orthopaedics, nervous and mental diseases, heart diseases, x-ray, gynecology and obstetrics, materia medica, and practice of medicine will be shown. Browse through this new material at the Mosby Booth.

V. MUELLER & COMPANY—Booth 7

The V. Mueller & Company exhibit will, as usual, cover the highlights of the various fields of surgery. It will include the very latest developments in surgical instruments, diagnostic equipment and short wave therapy.

A visit to Mueller's booth is always interesting and educational.

PARKE, DAVIS & COMPANY—Booth 2

Featured in the Parke, Davis exhibit will be the sex hormones, Theelin and Theelol; antisyphilitic agents, such as Mapharsen and Thio-Bismol; posterior lobe preparations, including Pituitrin, Pitocin and Pitressin; and various Adrenalin Chloride preparations.

PET MILK SALES CORPORATION—Booths 48 and 49

An actual working model of a milk condensing plant in miniature will be exhibited by the Pet Milk Company. This exhibit offers an opportunity to obtain information about the production of Irradiated Pet Milk and its uses in infant feeding and general dietary practice. Miniature Pet Milk cans will be given to each physician who visits the Pet Milk booths.

PETROLAGAR LABORATORIES, INC.—Booth 4

This year the Petrolagar Laboratories, Inc., will offer, in addition to samples of the Five Types of Petrolagar, an interesting selection of descriptive literature and anatomical charts.

Ask the Petrolagar representatives to show you the new HABIT TIME booklet. It is a welcome aid for teaching bowel regularity to your patients.

PHILIP MORRIS & COMPANY, LTD, INC.—Booth 15

Philip Morris & Company will demonstrate the method by which it was found that Philip Morris Cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes.

Their representative will be happy to discuss researches on this subject, and problems on the physiological effects of smoking.

W. B. SAUNDERS COMPANY—Booth 1

This publishing house will exhibit a great number of new books and new editions in addition to their many excellent works.

Among the more important new books and new editions that will be of particular interest to those attending the convention are Walters & Snell's "Diseases of the Gallbladder," the New (1940) Mayo Clinic Volume, Christopher's "Minor Surgery," Penn Riddle's "Injection Treatments," Buckstein's "Clinical Roentgenology of the Alimentary Tract," Levines "Clinical Heart Disease," Ewing's "Neoplastic Diseases," Wilder's "Clinical Diabetes Mellitus and Hyperinsulinism," Hauser's "Diseases of the Foot," McLester's "Diet and Nutrition," and many standard works such as Bickham's "Operative Surgery," Warbasse-Smyth's "Surgical Treatment," the Medical and Surgical Clinics of North America, and many others.

SCHERING CORPORATION—Booth 62

Schering Corporation's representatives will be pleased to discuss latest developments in hormone therapy.

New products on display will be Cortate (desoxycorticosterone acetate), Anteron (gonadotropic hormone from mares' serum), Pranturon (gonadotropic hormone from pregnancy urine), Pranone (orally effective progestin), as well as the other well-known Schering preparations—Progynon-B, Progynon-DH, Proluton, Oreton and Neo-Iopax.

OTTO SCHWEINBERGER & COMPANY—Booth 57

A free gift will be presented to each and every doctor visiting the Otto Schweinberger & Company Booth in celebration of their 15th anniversary.

They will feature the new Dual Wave Liebel-Flarsheim short wave diathermy, the Dual Spectrum ultra-violet lamp and portable X-Ray, and the new Portable Bovie surgical unit. There will also be on display a complete line of surgical instruments and laboratory equipment including the Spencer microscope.

SHARP & DOHME, INC.—Booth 50

Sharp and Dohme will have their new modern display at their booth this year, featuring Propadrine Hydrochloride Products, "Lyovac" Bee Venom Solution, and other "Lyovac" Biologicals.

There will also be on display a group of new pharmaceutical specialties and biologicals prepared by this house, such as Rabellon, Daldrin, Padrophyll, Elixir Propadrine Hydrochloride, Riona, Depropanex and Ribothiron.

Capable, well-informed representatives will be on hand to welcome physicians and furnish information on Sharp & Dohme products.

S. M. A. CORPORATION—Booth 3

Among the technical exhibits at the meeting of the Illinois State Medical Society this year, is an interesting new display, which represents the selection of infant feeding and vitamin products of the S. M. A. Corporation.

Physicians who visit this exhibit may obtain complete information, as well as samples, of S. M. A. Powder and the special milk preparations—Protein S. M. A. (Acidulated), Alerdex and Hypo-Allergic Milk.

SMITH, KLINE & FRENCH LABORATORIES—Booth 9

Smith, Kline & French Laboratories, believing that many physicians dislike efforts to make them register, have arranged their booth for self-service.

Up-to-date information about "Benzedrine Inhaler," "Benzedrine Sulfate," "Benzedrine Solution," Pentnucleotide, Feosol Tablets and Elixir, Oxo-ate "B," Eskay's Neuro-Phosphates and "Paredrine Hydrobromide with Boric Acid Ophthalmic" may be obtained in convenient envelopes from literature dispensers.

If additional information and data is desired, the representative will be glad to answer any questions.

E. R. SQUIBB & SONS—Booth 47

Physicians attending the Illinois State Medical Society convention, are cordially invited to visit the Squibb Exhibit.

The complete line of Squibb Vitamin, Glandular, Arsenical and Biological Products and Specialties, as well as a number of interesting new items will be featured.

Well informed Squibb Representatives will be on hand to welcome you and to furnish any information desired on the products displayed.

STANDARD X-RAY COMPANY—Booth 34

The Standard X-Ray Company wishes to extend to the doctors in attendance at the Centennial Meeting a most cordial invitation to visit their exhibit in Booth No. 34. Here you will find on display the very latest type of shockproof equipment that is suitable for installation in a doctor's office.

Items will be shown that are exclusive to Standard, and will incorporate many features that will not be found on other equipment. These many improvements are the result of over thirty years experience in the manufacture of x-ray equipment.

FREDERICK STEARNS & COMPANY—Booth 38

Doctors are cordially invited to visit our attractive convention booth to view and discuss outstanding contributions to medical science developed in the Scientific Laboratories of Frederick Stearns & Company.

Our professional representatives will be pleased to supply all possible information on the use of such outstanding products as Neo-Synephrin Hydrochloride for intranasal use, Mucilose (flakes and granules) for bulk and lubrication, Insulin-Stearns, Gastric Mucin, Trimax and Sulfanilamide tablets. A complete line of Vitamin products will also be displayed.

SUTLIFF AND CASE COMPANY, INC.—Booth 13

The physician who is served by SUTLIFF & CASE finds approximately 1000 medicinal products from which to choose his weapons to fight disease and death.

In addition to ethical pharmaceutical products, modern physicians' supplies and sundries are stocked for the convenience of physician and surgeon.

The SUTLIFF & CASE COMPANY possesses a splendid record of service to, and cooperation with, the medical progress; this record having been built on a solid foundation of 57 years of PROGRESS WITH THE PROFESSION.

WHITE LABORATORIES, INC.—Booth 41

White's Cod Liver Oil Concentrate will be presented for your consideration. At our booth you may obtain complete information concerning the entire field of cod liver oil concentration, with clinical data substantiating the efficiency of White's Liquid, Tablet and Capsule Concentrates.

Qualified representatives and descriptive literature, including reprints and excerpts from medical literature, will further direct attention to the contribution of White Laboratories in the Vitamin A and D field.

JOHN WYETH & BROTHER, INC.—Booth 56

John Wyeth & Brother, Inc., Philadelphia, cordially invites visitors to their booth. Among the specialties to be exhibited are:

AMPHOJEL—Wyeth's Alumina gel for the management of Peptic ulcer and hyperacidity.

ALULOTION—Ammoniated Mercury with Kaolin for the more rapid healing of Impetigo Contagiosa.

BEPRON—Wyeth's Beef Liver with Iron.

BEWON ELIXIR—The palatable appetite stimulant and vehicle.

KAOMAGMA—Wyeth's magma of alumina and kaolin for the control of diarrhea.

MUCARA—For intestinal stasis and

SULFUR FOAM—For the external application of Sulfur.

X-RAY EQUIPMENT COMPANY—Booth 54

The X-Ray Equipment Company, exclusive Illinois distributors of Mattern X-Ray Apparatus, will display the Mattern Model MX combination shock-proof, general diagnostic fluoroscopic and Bucky radiographic tilt table x-ray unit. The MX unit is available in 60, 100 or 200 milliampere capacity. The Mattern Deluxe 20-80 Shockproof Mobile X-Ray Unit will also be displayed. Visit the X-Ray Equipment Company booth and learn how, at surprisingly low cost, you can have the finest X-Ray facilities.

THE ZEMMER COMPANY, INC.—Booth 51

The Zemmer Company extends a cordial invitation to every member of the Illinois State Medical Society to visit their exhibit where they will display a number of their leading pharmaceutical products.

THE HALL OF HEALTH

May 21-25—1940

THE ARMORY

The following exhibits, compiled for lay education, may be seen at the Peoria Armory:

Booth 1. Boy Scouts of America, Creve Coeur Council. "Safety Through Skills."

Booth 2. Illinois Society for Prevention of Blindness, in Cooperation with W.P.A. "Prevention of Blindness."

Booth 3. Lions Club of Peoria. "Safety and Health."

Booth 4. Peoria Maternity Center. "Maternal Welfare Work in Peoria."

Booth 5. Department of Health—Division of Maternal and Infant Hygiene—State of Illinois. University of Illinois College of Medicine—Department of Obstetrics and Gynecology. Maternal Welfare Committee—Illinois State Medical Society. "The Essentials of Prenatal Care."

Booth 6. Sharp & Smith Hospital Division—A. S. Aloe Company. "The Original Dionne Incubator."

Booths 7, 8, 9, 10, 11, 12, 53, 54, 55, 56, 57, 58, 59. Department of Public Health—State of Illinois. "Public Health Service and Preventive Medicine."

Booth 13. Public Service Company of Northern Illinois. "Night Hazards of Driving."

Booth 14. Chicago Heart Association. "Prevention of Heart Disease Is Better Than Cure."

Booth 15. Illinois Dietetic Association. "What Is Your Score"

Booth 16. Peoria Public Health Department. "Quackery."

Booth 17. Illinois State Nurses Association. "Nursing Activities."

Booth 18. Peoria Visiting Nurses Association. "How to Be Happy Tho' Sick."

Booth 19. Peoria Council of Girl Scouts, Inc. "Child Care—A part of the Girl Scout Program."

Booth 20. Illinois Occupational Therapy Association. "Occupational Therapy."

Booth 21. Board of Education, and Peoria District Dental Society. "Dental Department Program."

Booth 22. "American Association of Medical Social Workers. United States Department of Labor. "Occupational Disease."

Booth 23. American Medical Association. *"Hygeia."*

Booth 23. American Medical Association. "Hygeia."

Booth 24. American Medical Association. "Food Fads."

Booth 25. American Medical Association. "Heart Disease."

Booth 26. Peoria County Tuberculosis Association "Tuberculosis Case Finding in a Rural Population."

Booth 27. Peoria Municipal Tuberculosis Sanitarium. "Diagnosis and Treatment of Pulmonary Tuberculosis."

Booth 28. American College of Surgeons. "Fractures."

Booth 29. Cancer Committee, Illinois State Medical Society. Women's Field Army, Illinois Division, American Society for the Control of Cancer. "Prevention and Control of Cancer."

Booth 30. St. Francis Hospital, Peoria. "Pathological Specimens."

Booth 31. Illinois Society for Mental Hygiene. "The Physician As a Mental Hygienist."

Booth 32. American Social Hygiene Association. "Illegal and Unethical Practices in Relation to Syphilis and Gonorrhea."

Booth 33. The American Medical Association. "Dangers of Self-Diagnosis and Self-Medication."

Booth 34. American Medical Association. "Prevention of Eye Injuries."

Booth 35. American Medical Association. "Prevention of Burns."

Booth 36. National Physicians' Committee for the Extension of Medical Service.

Booths 37, 38, 40, 41, 42. Illinois Physicians and Surgeons. "Pictures."

Booth 39. American Red Cross. "Civilian Relief."

Booth 43. Peoria Police Department. "Accident Investigation Bureau." "First Aid Methods and Equipment Used by Police in Investigation of Traffic Accidents."

Booth 44. Works Progress Administration of Illinois. "Health Projects in Illinois."

Booth 45. Chicago Society of Allergy. "What Is This Thing Called Allergy?"

Booth 46. Illinois Congress of Parents and Teachers. "Health Activities."

Booth 47. Metropolitan Life Insurance Company. "New Methods of Pneumonia Control."

Booths 48, 49, 50. Illinois State Planning Commission. "General Health and Educational Exhibit."

Booth 51. Illinois Bell Telephone Company. "First Aid Demonstration."

Booth 52. Chicago Rapid Transit Company—Medical Department. "The Evolution of Resuscitation."

Booths 53, 54, 55, 56, 57, 58, 59. State of Illinois, Department of Public Health. See under Booth 7.

Booth 60. Chicago Medical Society. "Results of Survey."

Booth 61. Educational Committee—Illinois State Medical Society. "Your Medical Society and You."

Booths 62, 63. Woman's Auxiliary to the Illinois State Medical Society. "History of Medicine in Illinois."

Booth 64. Central Council for Nursing Education. "Preparation for Nursing."

Booth 65. Young Women's Christian Association. "Health Is Fun."

ILLINOIS STATE MEDICAL SOCIETY

One-Hundredth Annual Meeting

PEORIA, ILLINOIS

May 21, 22, 23, 1940

OFFICERS

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FIVE HUNDRED THOUSAND ARE VICTIMS OF DAILY INJURIES

Washington, April 2.—Ten million accidents serious enough to disable their victims one day or longer occur annually in the United States.

Each day 500,000 persons are unable to work, go to school or pursue their usual activities as the result of injuries caused by accidents resulting from multiple sources, the Public Health Service announced today.

The service disclosed that 7 per cent of the deaths among the 70,000 families canvassed were the result of accidental injury. Accidental deaths were exceeded only by mortalities from disease of the heart, cancer and pneumonia.

It was revealed that sixteen of every 1,000 persons are disabled for a week or longer by injuries each year. The average period of disability experienced by the victims of serious accidents is forty-six days. This is compared with the average duration of disability from all causes, which is fifty-seven days. Automobile accidents average fifty-five days of disability.

Many Are Maimed

Maiming injuries occur most frequently in the course of work, the report states, since 70 per cent of the lost fingers and 46 per cent of the loss of other members are attributed to occupational casualties. For impaired members, however, home accidents are of equal importance to industrial mishaps.

The home is far from being the safest place, as it is usually considered. More than 30 per cent of all accidents occur there. The home injuries result mainly from falls, burns and cuts.

Boys and men are more liable to suffer accidental injury than are girls and women until the age group above 65 years is reached. The situation is then reversed.

The greatest single source of accidental injury is the fall, which is credited with 39 per cent of all the serious disabling factors. Falls are even a greater menace at present than automobiles, which are responsible for 20 per cent of the nation's yearly accident toll.

Autos Are Deadly

However, the automobile is responsible for the greatest number of accidental fatalities. Persons injured in an automobile are two and one-half times as likely to die as persons injured by any other means.

The report associates the higher rate of accidents in the homes of the very poor with inadequate housing facilities. Faulty stairways, poor living and heating conditions and rickety furniture are all factors which are responsible for the excessive home injuries among the lower third income group.

The National Health Survey is attempting a solution of the natoin's ever-increasing accident problem by endeavoring to ascertain the source and circumstances under which serious mishaps occur. In this way they hope to suggest preventive measures for each type of accident.—*San Francisco Examiner.*

THE MENACE OF RATS

The unenviable position which rats have come to occupy as a proven factor in the transmission of certain diseases is well known. Their possible involvement in the transmission of certain infections whose method of communicability is at present unknown can only be surmised. The medical profession definitely realizes that rats are a menace to human beings; that there cannot be recognized a single favorable attribute of the rat; and that all that is known of the rat points to its inevitable involvement with human destiny in both an economic way and in spheres of health.

In writing on this subject in a recent issue of *Hygeia,* John M. Gibson estimates the country's rat population at twice its human population. He also estimates that each of these approximately two hundred million disease carrying rodents consumes food costing at least $2.00 a year each. The nation's annual rat food bill, therefore, amounts to considerably more than half a billion dollars.

Hans Zinsser in his book *Rats, Lice and History,* has recently emphasized an interesting fact usually overlooked by historians. He points out that the ravages of certain diseases have been able to change the course of history and determine the fate of empires. Although there is no certain historical knowledge of the rat in Europe before the twelfth century, it is highly probable that some similar form of rodent was responsible for the spread of such devastating epidemics as the bubonic plague. However, we do know that at about this time the black rat came into Europe from Asia and in an incredibly short time swept the country although at the present time it has been replaced by the brown rat. Wherever this rat has gone, it has driven out the black rat and all rodents that compete with it. Again there is nothing that can be said in its favor. It can live anywhere and eat anything. It burrows for itself when it has to but when it can, it takes over the habitations of other animals such as rabbits and kills them and their young. It climbs and it swims. It is known to carry the following diseases of men and animals: plague, typhus, trichinella spiralis, rat-bite fever, infectious jaundice, possibly trench fever, probably foot and mouth diseases and a form of equine "influenza." Its connection with other diseases as a vector is quite possible although unproven.—Bull. Sangamon Co. M. S.

PULSE RATE AT DIFFERENT AGES

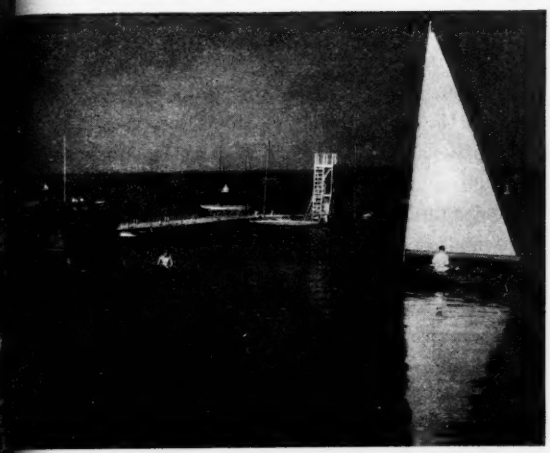
Birth	130-150	2 to 4 years	90-110
1st month	120-140	6 to 10 years	90-100
1 to 6 months, About	130	10 to 14 years	80- 90
6 to 8 months, About	120	Adult Age, Average	72
1 to 2 years	110-120	Old Age, Average	67

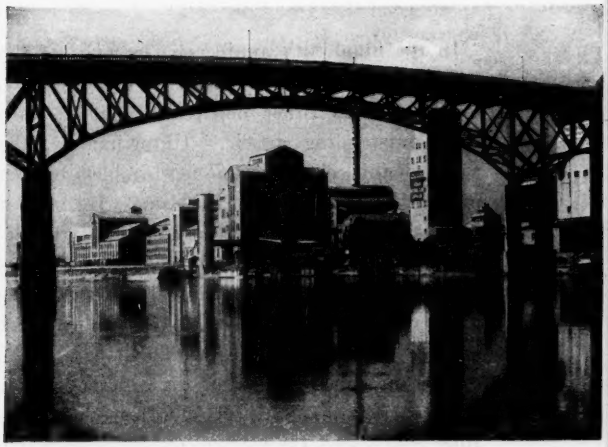
Picturesque Peoria

Aerial View of Peoria

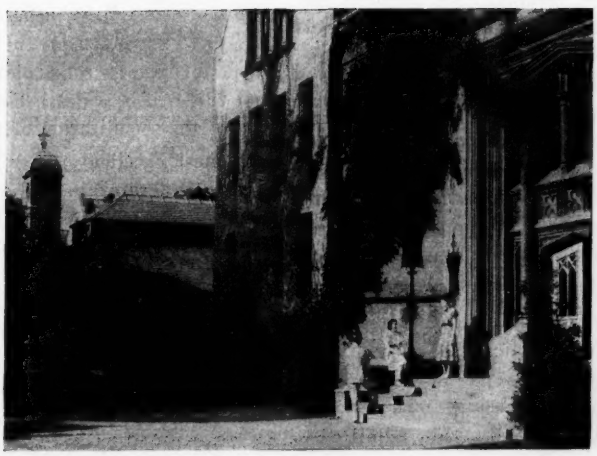
Views about Peoria

Picturesque Peoria





Scenes in Peoria



MEDICAL ECONOMICS

H. M. Camp, M. D.
E. P. Coleman, M. D.
J. H. Hutton, M. D.
J. R. Neal, M. D.
Ralph Pearl, M. D.

Edited by the Committee on Medical Economics
of the
Illinois State Medical Society
E. S. Hamilton, M. D., Chairman
Kankakee, Illinois

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Address all letters and communications to the Chairman.

In the hundredth anniversary number of the founding of the Illinois State Medical Society, this and every other department should have some outstanding article. Unfortunately, the writer of this column has no new problem to even present, let alone solve at this time. He finds it increasingly difficult to keep abreast of the developments each month in the various problems which have been and still are confronting the medical profession. Some of these problems are old and some new. All are difficult of solution due to the varying views of the different people involved therein. So the best we can do at this time is to report the changes on the various economic fronts during the past month, in the hope that we will stimulate a new or increased interest on the part of some of the readers of this column.

The recent report of the American Medical Association on "Medical Care in the United States" should be of great interest to all medical men in the United States. Most interesting and important is the conclusion arrived at, that with the exception of isolated communities, there is no important section of the population of the United States that now fails to receive the medical care it needs and desires. The statement that the physicians of the United States render free medical care of an approximate value of $1,000,000 per day was verified and corroborated. This of course does not include those patients to whom services are rendered with the hope that the attending physician is to be paid, only to have that hope dissipated by their failure to do so.

Modern Medicine, one of the many free periodicals in tabloid form, which now come to the desk of the medical profession of the United States, has recently conducted its own referendum on Federalized Medicine. While admittedly incomplete it was general enough to arrive at some conclusions which are in accord with those of the American Medical Association. 85% of the 20,215 ballots received, show that they are opposed to any radical change in the manner of conducting the practice of medicine in the United States, even to the point of refusal to participation in any system of federalization of medical service. This is a higher percentage of opposition than that received from a similar questionnaire sent out two years age. This shows that there is a growing opposition to so-called "Socialization of medicine." Of especial interest is the approval of the Platform of the American Medical Association by between 85 and 88% of the replying physicians. This is most encouraging for there has been altogether too much talk that the American Medical Association does not speak for the profession at large and this report from a disinterested party will do much to refute such statements. Many newspapers and congressmen have commented favorably on the facts brought out by this survey, some going so far as to state that since this one verifies the report of the A.M.A., socialized medicine is probably put very much on the defensive. It is too much to hope as some of the commentators do that this will be a death blow to the entire question of the socialization of medicine.

A most excellent review of "A New Federal Health Program" in the April 5, 1940 issue of the *United States News* will be printed in this column. This is done with the approval of the News Editor, F. J. Hall. It gives a good resume of the most recent hope of the reformers. It should be read by every member of the Illinois State Medical Society. They should also read the recently presented plan of Senator Taft of Ohio printed in full on page 1676 of the *Journal of The American Medical Association* of April 27, 1940, with an editorial comment on page 1670. It is only by following the new developments in this field that we as physicians can re-

Reprint from The United States News, an independent weekly magazine on national affairs, published at Washington, Apr. 17, 1940.

main able to answer the questions asked us by our patients and other members of the laity in regard to "State Medicine."

At the coming meeting of the House of Delegates at the annual meeting of the Illinois State Medical Society in Peoria May 21-23, there will be a report of the special committee appointed to investigate the question of Voluntary Health Insurance in Illinois. This question was referred to the Council by the House of Delegates in 1939, who in turn referred it to the Medical Economics Committee. A special Committee under the Chairmanship of Dr. W. M. Hartman of Macomb has investigated this subject most thoroughly at a great expense of time on their part. They, through the Medical Economics Committee will report to the House of Delegates with definite recommendations in regard to whether such a plan should be started in Illinois at this time. Of course, the decision will be arrived at by the House of Delegates. It should be incumbent on every member of the House to learn as much as possible in regard to what is being done in other parts of the United States as well as to determine what the needs are in his particular community. Also the desire of the rank and file of the medical profession in his community should be determined and he should come to the annual meeting ready and willing to do his part in arriving at the proper decision.

Those interested in what is happening to the medical profession in England and France as a result of their participation in the current European War should read "Medicine Behind the Lines," by Leicester Cotton and C. M. Chambers in the April issue of *Medical Economics*. Some of the difficulties encountered can be blamed onto the war alone, but apparently some of them are the result of the last thirty years experiment with "State Medicine." Regardless of the cause, the results are certainly demoralizing to the medical profession and any lesson that we can learn by remote control should be profited by. Read it if you have time and then hope that we in the United States will not be embroiled in the age old struggle of European nations for power and more land. We have all we can do here to solve our national problems.

E. S. HAMILTON, M.D.,
Chairman.

DEAFNESS

Crowe and Bayloy* present evidence that progressive deafness of middle ear origin begins during childhood and may be prevented if remedial measures are taken.

Chronic partial occlusion of the eustachian tubes by nodules of lymphoid tissue causes retraction of the tympanic membrane, impaired hearing for high tones, and sometimes a total loss of hearing by bone conduction. (These findings indicate that it is necessary to reconsider the diagnostic criteria for differentiating middle and inner ear types of deafness.)

The authors describe the procedure for handling children who present evidences of obstruction of the eustachian tubes. A careful history is taken to uncover the evidences of tubal obstruction. Insidious, slowly progressing deafness, recurring attacks of otitis media, and chronic otorrhea are important facts to be sought in the history.

A careful physical examination, including a nasopharyngoscopic inspection and a tuberculin test are made. Everything possible is done to improve resistance to colds. Healthful habits are instituted. The tonsils, adenoids, and hypertrophied lymphoid tissues on the pharyngeal wall and at the base of tongue are surgically removed. Intensive follow-up treatment with radium and high voltage X-rays is then carried on to prevent regrowth of the lymphatic tissue in the nasopharynx. This phase of the medical supervision is important and continued over a long period of time.

Citing case material covering about 10 years of study, the authors indicate that the hearing of children may be safeguarded, and that children having severe degrees of hearing loss from tubal obstruction may even be cured. After the age of fifteen years the results are far less satisfactory.

If the school health service is to contribute actually to the prevention of deafness, we must not only discover the hard of hearing child and be alert to identify those children who present conditions which are likely to result in deafness, but we must also assume the important responsibility of continued education and follow-up. Too frequently parents and children will neglect the medical superivision which is necessary over a long period of time. The deaf child, the child susceptible to ear and upper respiratory infections, the cardiac child, the diabetic child, and others often require continued and frequent guidance if we are to prevent deviations from the path of health.

*The Prevention of Deafness, S. J. Crowe, M. D., and John W. Bayloy, M. D., J. A. M. A., Feb. 18, 1939.

THE PUBLIC HEALTH SERVICE LEAVES THE TREASURY DEPARTMENT

After nearly 141 years, only 9 years less than the full life of the nation itself as an independent republic under the Constitution, the United States Public Health Service leaves the administrative jurisdiction of the Treasury Department and passes into the Federal Security Agency.

DILANTIN (SODIUM DIPHENYLHYDANTOINATE) IN TREATMENT OF EPILEPSY

J. A. MORGAN, M. D.
Elgin State Hospital
ELGIN, ILLINOIS

Extensive experimental and clinical investigations have been carried on by various groups interested in the treatment of epilepsy. A variety of methods have been evolved such as the medical treatments with bromides and barbiturates; the ketogenic diet, restriction of fluids; the surgical excision of scars or irritable cortical foci; the use of snake venom, rabies vaccine and diacetone alcohol. Notwithstanding the beneficial results obtained from several of the above mentioned methods, particularly the bromides and barbiturates, a great number of patients are not relieved of their attacks, or are helped only temporarily by their continued use. This has led to a further search by investigators for a more potent and less sedative compound.

At the annual meeting of the American Medical Association for 1938, Doctors Huston Merritt and Tracy J. Putnam reported the use of a new drug which according to laboratory tests, had great potentialities in the treatment of epilepsy. The drug is somewhat analagous in structure to the barbiturates. It is an odorless white powder with a bitter taste and is soluble in water.

They reported on 200 patients who were placed on this drug for a period ranging from three weeks to eleven months. Their conclusions showed that 58 per cent of 118 patients with frequent grand mal attacks secured complete relief. In 27 per cent the frequency of attacks was reduced. In 74 patients with petit mal 35 per cent obtained complete relief and 49 per cent a decreased frequency. No abnormalities in blood counts, urine examination or blood pressure.

The dosage which effectively controls epileptic seizures varies in adults between 0.2 and 0.6 Gm. daily. They used 0.1 Gm. doses three times daily and increased gradually to 0.2 Gm. three times daily if necessary. The optimum dosage is determined by trial. Previous medication is gradually withdrawn as the new medication is instituted so there is an overlapping; otherwise sudden withdrawal may bring unfavorable results.

The following toxic reactions to sodium diphenylhydantainate have been noted: dizziness, slight nausea, tremors, ataxia, blurred vision and transient diplopia. More serious reactions are scarletiniform dermatitis or a purpura, alleviated by a decrease or entire elimination of the drug until symptom-free, after which it can be reduced with a reduction in dosage. Gingival swelling, due to the loss of vitamin C has also been observed.

Contraindications are the use of the drug in aged patients with hypertension, cardiorenal disease or in marked debility.

At the Elgin State Hospital this drug has been used on a small series of patients. Due to a limited supply only eight were selected—those who had the greatest number of grand mal seizures at the most frequent intervals—one to several per day. Blood counts, urine analysis and blood pressures taken before and after treatment revealed no changes. Their reflexes and responses to heat and cold were also tested but nothing unusual was found. All were taking luminal with no relief from their attacks. The drug was gradually instituted as luminal was withdrawn; dosage varied from 0.1 grams (1½ grains) four times daily to 0.2 Gms. (three grains) three times daily for three months.

The following observations were made:

1. None of the cases developed serious toxic reactions. Practically all complained of initial nervousness, which may have been due to withdrawal of luminal that gradually left them.

2. All those who were able to express themselves claimed that they were benefited. Others were commented upon by attendants who reported beneficial changes.

3. The outstanding result was the cessation of convulsions in three cases with the continued use of the drug. The remaining five experienced longer intervals between seizures and the latter were milder in character.

In two of the above three classes, upon withdrawal of the drug and resumption of luminal therapy, no convulsions occurred for four weeks. In the remaining cases the convulsions returned in a very short time.

THE STATE OF MASSACHUSETTS has recently passed legislation which makes it possible to protect its citizens in medical affairs. Hitherto there has been no provision for examining candidates for licenses to practice medicine except by a written test—a method of determining competence considered inadequate by all other states. Now Massachusetts is

requiring that those who take the licensing examination must be graduated from approved medical schools.

A board, which has the authority to formulate standards in medical education, has been organized and will pass on the qualifications of schools of medicine. Massachusetts is to be congratulated upon this step which raises the qualifications of its medical practitioners to the general level prevailing throughout the United States.—Editorial, Jour. of Amer. Med. Assn.

News of State

A SERIES OF FOUR SESSIONS IN OBSTETRICS AND PEDIATRIC FOR MEDICAL PHYSICIANS OF ILLINOIS OUTSIDE CHICAGO

Limited to 18 Physicians for Each of the One-Week Sessions

Beginning July 8, 1940

Each summer for the past three years leading obstetricians and pediatricians of the great Chicago medical schools have joined with the departments of obstetrics and pediatrics of the University of Illinois to participate in giving short intensive courses in obstetrics and pediatrics for the general practitioners of Illinois.

The aim of the courses has been to answer as many of the problems of general practitioners in these two fields as is possible in the short space of one week's time. For this reason formal lectures are not featured but rather small group conferences with qualified instructors. One formal lecture is given at the beginning of each day, and then the remainder of the morning is spent in work with patients in the dispensary. The noon lunch is followed by a round table discussion of some phase of obstetrics or pediatrics. The mid-afternoon period is given over to ward walks in both Research and Educational Hospitals and in Cook County Hospital. The group is divided into two sections for the dispensary work and ward walks so that part of the group works in obstetrics and part in pediatrics at the same time. The final period of the day is given over to special demonstrations, consultation hours in pediatrics and obstetrics and maniken work. Where it is desired, arrangements are made as far as possible for delivery demonstrations, both normal and pathological, in the home and in the Research Hospital.

A departure from neonatal pediatrics is being made this year, and particular attention will be given to medical and surgical pediatrics. Such special phases as behavior, allergy, acute surgical conditions, pneumonia, etc., will be discussed. Such special topics in obstetrics as local anesthesia and analgesia as well as gynecological discussions will be featured also.

The following well-known teachers, and many others, participate in giving the courses:

Dr. J. L. Baer, Prof. of Ob. and Gyn., Rush Medical College.

Dr. Bert J. Beverly, Asst. Prof. of Ped., Rush Medical College.

Dr. W. H. Browne, Asst. Prof. of Ob. and Gyn., U. of Ill.

Dr. E. L. Cornell, Asst. Prof. of Ob. and Gyn., Northwestern U.

Dr. W. C. Danforth, Prof. of Ob. and Gyn., Northwestern U.

Dr. F. H. Falls, Prof. of Ob. and Gyn., U. of Ill.

Dr. C. W. Finnerud, Asst. Prof. of Dermatology, Rush Medical College.

Dr. B. L. Hamilton, Prof. of Ped., U. of Chicago.

Dr. J. H. Hess, Prof. of Ped., U. of Ill.

Dr. Paul Holinger, Assoc. Bronchologist, U of Ill.

Dr. A. J. Kobak, Asst. Prof. of Ob. and Gyn., U. of Ill.

Dr. S. O. Levinson, Samuel Deutsch Serum Center.

Dr. H. A. Lindberg, Chief, Division of Pneumonia Control, State Dept. P. H.

Dr. Edwin Miller, Assoc. Prof. of Surgery, Rush Medical College.

Dr. Albert Montgomery, Chief Surgeon, Children's Memorial Hospital.

Dr. Charles Newberger, Asst. Prof. of Ob. and Gyn., U. of Ill.

Dr. H. G. Poncher, Assoc. Prof. of Ped., U. of Ill.

Dr. F. E. Snear, Prof. of Dermatology, U. of Ill.

Dr. H. J. Shaughnessy, Chief, Division of Lab., State Dept. P. H.

This year the course will be given for only four sessions of one week each. The opening dates are as follows:

July 8, 1940.
July 15, 1940.
July 22, 1940.
July 29, 1940.

The registration fee is $10.00. For further information address Mr. G. R. Moon, Registrar, University of Illinois College of Medicine. Rooms at reasonable rates may be had at the Professional Y.M.C.A., 1804 West Congress Street, Chicago, Illinois.

WOMAN'S AUXILIARY TO THE ILLINOIS STATE MEDICAL SOCIETY

Peoria County: The Woman's Auxiliary of the Peoria Medical Society had a dinner and business meeting April 2nd, at the University Club. At the opening of the meeting the president, Mrs. O. E. Barbour, presented an ebony and silver gavel to the auxiliary, which was accepted by the vice president, Mrs. H. F. Diller. There were 48 members present. The Advisory Committee which includes Drs. C. G. Farnum, chairman; E. C. Kelly, co-chairman; Margaret B. Meloy, Wm. A. Hinckle and Ray King, were introduced.

Adams County: Dr. James H. Hutton, Pres. Illinois State Medical Society was guest speaker at a meeting of the auxiliary held April 8th in the home of Mrs. W. Stevenson. His topic was, "Some Impor-

tant Facts All Auxiliary Members Must Know." Mrs. W. M. Whitaker, Pres. presided at the meeting.

Sangamon County: The following officers were elected for the year 1940-1941 at a meeting held in the home of Mrs. H. Southwick. Pres., Mrs. M. E. Rolens, Vice-Pres., Mrs. R. S. Campbell, Sec'y, Mrs. A. T. Kedar, Treasurer, Mrs. W. J. Morginson.

Mrs. C. W. STUART,
Chairman, Press & Publicity.

MEDICAL DIVISION, NORTHWESTERN UNIVERSITY ALUMNI ASSOCIATION

The annual alumni-faculty reunion of Northwestern University Medical School is being held May 24 and 25, 1940. On May 24th a golf tournament will be held at the Illinois Country Club in the afternoon, and several class reunion dinners will be held in the evening. On Saturday, May 25th a symposium on the "Gastro-Intestinal Tract," participated in by members of the faculty, will be given in Room 108, Passavant Memorial Hospital. That evening the annual Faculty-Alumni banquet will be held at 6:30 P. M. in the Grand Ballroom of the Drake Hotel.

All Northwestern medical graduates are urged to attend as an interesting and enjoyable two days are anticipated. Dr. Howard B. Carroll, '25, Chairman in Charge.

The Alumni of Northwestern University Medical School are holding a luncheon in the Early American Room of the Hotel Pere Marquette, Peoria, Illinois, on May 22, 1940, at 12:00 noon. All Northwestern men are urged to be present. Dr. George Parker, '02, Chairman in Charge.

Walter H. Nadler, '13,
President, Medical Division,
Northwestern University
Alumni Association.

PEDIATRICIAN'S LUNCHEON

A joint luncheon meeting of the Section on Pediatrics of the Illinois State Medical Society and American Academy of Pediatrics of Illinois, will be held Wednesday noon, May 22, at the Creve Coeur Club and it is scheduled for 12:00 o'clock. All physicians interested in Pediatrics are invited to attend and should notify Dr. John R. Vonachen, 901 Hamilton Boulevard, Peoria.

ATTENTION

GRADUATES OF THE COLLEGE OF MEDICINE, UNIVERSITY OF ILLINOIS

The Alumni Association of the College of Medicine, University of Illinois, most cordially invites all graduates of the College of Medicine and the members of its faculty, to attend the Annual Alumni Luncheon, which will be held at Peoria during the meeting of the Illinois State Medical Society, on Wednesday, May 22, 1940, at twelve o'clock at the Pere Marquette Hotel. Matt A. Reasoner, '99, Colonel United States Army, will preside.

The Committee in charge of local arrangements, Dr. William A. Malcolm, Chairman, Dr. Everett C. Kelly, and Dr. Kenneth N. Petri, assure us this will be a good meeting. Plan to take luncheon with your old college friends.

M. H. Streicher, '24, Secretary.

Marriages

CLARENCE BERNSTEIN, Chicago, to Miss Babette Friedmann of Philadelphia, March 12.

IRVING GINSBURG, Chicago, to Miss Selma Mervis of Lima, Ohio, February 18.

ZIGMORE HARRIS, Chicago, to Miss Sylvia Estelle Hirsh, April 14.

KEITH J. LONG, Fairview, Ill., to Miss Dorothy Wood of Peoria, February 7.

FRANCIS X. MEIER, Milan, Ill., to Miss Melva Rounsaville of Moline in January.

Personals

Dr. Carlo Scuderi was invited to give a paper on "Fractures" before the Vermilion County Medical Society, April 2.

Dr. Stanley Gibson gave a paper on "Rheumatic Heart Disease in Children" before the doctors of Beardstown on April 3.

Dr. James H. Hutton addressed a joint meeting of the Madison County Medical Society and the Madison County Bar Association at Alton on April 4.

Dr. Max Cutler was the guest speaker at the dedication of the new department of radiation therapy at St. John's Hospital, Cleveland, Ohio, on March 27. He also spoke in Atlanta, Georgia, on March 29 on the Control of Cancer.

Dr. M. Herbert Barker spoke before the La-Porte County Medical Society March 21. Subject, "The Present Status of the Medical and Surgical Management of Hypertension."

Dr. Joseph L. Baer addressed the Knox County Medical Society, Galesburg, April 4. Subject, "Prolonged Labor."

Dr. Arthur H. Conley addressed the Will-Grundy County Medical Society at Joliet, April 19.

Dr. Max Thorek addressed the Elkhart County Medical Association of Elkhart, Indiana, at its annual meeting on April 4 on "Electrosurgical Obliteration of the Gallbladder."

Dr. Clifford J. Barborka gave a paper before

the Arkansas State Medical Meeting at Fort Smith, April 15, subject "Gall Bladder Disease."

Dr. I. Pat Bronstein gave a paper on "Endocrine Disturbances in Infancy and Childhood" before the Will-Grundy County Medical Society on April 5.

Dr. Eric Oldberg addressed the Dane County Medical Society at Madison, Wisconsin, April 9 on "Some Practical Facts About the Spinal Cord."

Dr. Henry E. Irish was to give a paper on "Useful Drugs in Infancy" before the Lawrence County Medical Society on April 10.

Dr. Lindon Seed spoke on "Tumors of the Neck" before the McDonough County Medical Society, April 10.

Drs. Frederick H. Falls and Clifford Grulee presented a program on Obstetrics and Pediatrics at Monmouth for the Warren County Medical Society, April 11.

Dr. John R. Ballinger was invited to give "A Brief on Medico-Legal Law" before the Will-Grundy County Medical Society on April 12.

Drs. W. J. Dieckman and Julius H. Hess presented a program before the Jersey Green County Medical Society on April 12, subjects "Vanishing Toxemias of Pregnancy" and "The Premature Infant."

Dr. Heyworth N. Sanford gave an address on "Studies in Blood Coagulation Disturbances" before the Missouri State Medical Association at Joplin, Mo., on April 29.

Dr. Joseph L. Baer spoke on Endocrines in Obstetrics and Gynecology before the Lancaster County Medical Society at Lincoln, Nebraska, April 16.

Dr. Italo F. Volini gave a paper before the Kankakee County Medical Society on April 9.

Dr. James H. Hutton addressed the Adams County Medical Society and the Bureau County Medical Society on April 8 and 9, subject "Recent Advances in Endocrinology."

Dr. Meyer Brown, Chicago, addressed the Madison County Medical Society, Granite City, March 1, on "Headache, Including Migraine."

Dr. Mary R. McConahy, oldest alumna of the University of Michigan Medical School, Ann Arbor, recently observed her one hundredth birthday at the Presbyterian Home, Evanston. She graduated in 1890.

Dr. Milton C. Winternitz, New Haven, Conn., conducted a clinic and discussed "Problems of Vascular Pathology" before the Peoria City Medical Society, March 5. Dr. Clifford U. Collins addressed the society, March 19, on medico-legal problems.

Dr. Burrill B. Crohn, New York, lectured at the University of Illinois College of Medicine, March 2, under the auspices of Alpha Omega Alpha, on "Peptic Ulcer."

Dr. Francis M. Rackemann, Boston, addressed the North Side Branch of the Chicago Medical Society, April 4, on "What the Practitioner Should Know About Allergy."

Dr. Temple S. Fay, professor of neurology and neurosurgery, Temple University School of Medicine, Philadelphia, discussed "Temperature Factors as Related to Cancer" at the University of Illinois College of Medicine, April 27. The lecture, sponsored by Alpha Omega Alpha, is open to students, faculty members and all interested persons.

The Christian County Medical Society was addressed at Taylorville on March 27, by Dr. Otto Schwarz on "Obstetric Hemorrhages," and by Dr. W. M. Whitaker, Quincy, on "Allergic Child."

The Chicago Surgical Society announces the results of the competition for its Second Annual Prize of $250.00. The Committee was unable to distinguish in excellency between two of the papers submitted; consequently the prize was divided equally between Dr. Leon J. Aries for his paper entitled "Experimental Analysis of the Growth Pattern and Rates of Appositional and Longitudinal Growth in the Rat Femur," and Dr. Carl Ireneus, Jr., for his paper entitled "Experimental Bile Pancreatitis with Special Reference to Regeneration (Recovery) and to the Toxicity of the Hemorrhagic Exudate." These papers will be presented before the Chicago Surgical Society at its meeting on May 10, 1940.

Dr. Robert S. Berghoff, Clinical Professor of Medicine at Loyola University School of Medicine, and Chairman of the Scientific Service Committee of the Illinois State Medical Society, has been elected to membership in the Alpha Omega Alpha Honorary Medical Society in the chapter of his alma mater, St. Louis University. He was inducted at St. Louis on April 24 and on that occasion was the principal speaker. His subject was "Senile Ecstasy."

News Notes

—The Chicago Medical Society devoted its meeting on April 17 to a discussion of "Infant Mortality in Chicago 1935-1939" by Dr. William I. Fishbean. Drs. Luella E. Nadelhoffer and Julius Hess discussed "Maternal Mortality in Chicago 1935-1939." A clinical meeting was held at the Chicago Lying-In Hospital in the morning and afternoon.

—"The Romance of a Century of Medicine," will be dramatized by the Peoria Broadcasting Company and Radio Station WMBD in a special program dedicated to the Illinois State Medical Society and its founders the evening of May 22, following the President's Dinner.

Doctors and their wives are invited to attend the half-hour presentation, which opens at 9:30 p. m., from the stage of the Shrine Mosque.

—J. Christian Bay, librarian of the John Crerar Library, gave an address in the assembly room of the Institute of Medicine of Chicago, April 16, under the auspices of the Society of Medical History of Chicago. He discussed "Men, Method, and Memory in Scientific Progress." Dr. M. Ruiz Castañeda, department of medical research, General Hospital, Mexico City, gave an illustrated lecture at a joint meeting of the Institute of Medicine of Chicago, the Chicago Society of Internal Medicine and the Chicago Pathological Society, April 29, at the Palmer House, on "Recent Advances in Research on Typhus in Mexico." The second Ernest Edward Irons Lecture was delivered at Billings Hospital, March 26, by Dr. David P. Barr, Busch professor of medicine, Washington University School of Medicine, St. Louis, on "The Nature of Obesity." Dr. Edward W. Archibald, emeritus professor of surgery, McGill University Faculty of Medicine, Montreal, Que., delivered the sixteenth Lewis Lin McArthur Lecture of the Frank Billings Foundation before the Institute of Medicine of Chicago, April 26. His lecture was entitled "Discussion of the Theories Concerning the Causation of Acute Pancreatitis."

—The Ravenswood Hospital held its third of a century anniversary at the North Shore Country Club, May 8.

Dr. George N. Bussey and Dr. George de Tarnowsky, two physicians who were active in the organization of the Hospital and who have been active during the thirty-three years of its existence, were guests of honor.

The program included presentation of gifts to the honored guests by Dr. Richard F. Greening, President of the Medical Staff, and Dr. Darwin H. Pond, the Hospital's first intern.

Mrs. Wm. Lill, President of the Woman's Auxiliary, and James R. Cardwell, Chairman of the Board of Trustees, delivered congratulatory messages.

Miss Kathryn Witwer, prima donna soprano of the Mutual Broadcasting System, rendered several solos.

—To fill the position of superintendent of the division for handicapped children in the state department of public welfare, applications will be received until midnight, April 7. Qualified persons must be graduates of approved medical schools; must have completed internship in an approved hospital; must have had two years training and experience in pediatrics of a quality comparable to that accepted by the American Board of Pediatrics, including one year as resident in pediatrics in a hospital approved for such residency; must have administrative ability or experience such as that evidenced by several years of successful employment in public health or welfare administration, administration of medical services for children, or other administrative work of a related character. Address the Executive Secretary, Illinois Commission for Physical Handicapped Children, 1800 West Fillmore Street, Chicago.

—The Illinois State Medical Society sponsored postgraduate conference in the assembly hall of the Dixon State Hospital, Dixon, April 18. The following program was arranged:

Dr. Julius H. Hess, Chicago, Bronchiectasis in Childhood.

Dr. Charles M. McKenna, Chicago, Some Problems in the Diagnosis of Renal Tumors.

Dr. Francis E. Senear, Chicago, Diseases of the Skin.

Dr. Delmas K. Kitchen, Detroit, Diagnosis and Therapy of Sexual Immaturity.

Dr. Warren G. Murray, Dixon, Interesting Cases Shown by Staff Members of the Dixon State Hospital.

Dr. Carl V. Moore, St. Louis, Differential Diagnosis and Treatment of the Hemorrhagic States.

Dr. Charles B. Puestow, Chicago, Influence of Drugs on Intestinal Motility.

Dr. Harold D. Palmer, Rockford, Clinical Pathology of the Kidney.

Dr. Charles F. Sawyer, Chicago, Biliary Tract Disease.

Dr. Robert S. Berghoff, Chicago, Thyroid Heart Disease and The Diseased Gallbladder and Its Relation to Heart Disease.

—During the convention of the American Medical Association in New York City, June 10 to 14, 1940, the Jefferson Medical College Alumni Association will hold its Reunion Banquet on Wednesday, June 12, at 7 P. M., at the Murray Hill Hotel on Park Avenue at 40th Street. Tickets are $2.50 each.

Request for reservations may be addressed to me at that hotel.

But if you neglect to make reservations—come anyway.

THOMAS F. DUHIGG,
Chairman Dinner Committee.

—The annual meeting of the Iowa and Illinois Central District Medical Association will be held Thursday, May 16, at the Outing Club in Davenport, Iowa.

The program will begin at 3 P. M. with Dr. August A. Werner, assistant professor of Internal Medicine, St. Louis University School of Medicine, who will deliver an address, "The Anterior Pituitary Gonad Relationship in the Female." At 4 P. M. Dr. John J. Shea, head of the John J. Shea Clinic of Memphis, Tesnessee, will deliver an address, "The Management of Tonsil and Adenoid Surgery." At 5 P. M. Dr. Italo F. Volini, professor and head of the department at Loyola University School of Medicine, Chicago, Illinois, will deliver an address on "A Survey of Heart Disease."

Dinner will be served at 6:00 P. M. After this there will be the election of officers.

At 7:45 P. M. Dr. C. G. Farnam of Peoria, Illinois, will recite some original medical poems, "Nonsense in Rhyme."

At 8:15 P. M. Dr. Walter C. Alveraz, professor of Medicine University of Minnesota (Mayo Foundation) and Senior Consultant in the Division of Medicine in the Mayo Clinic, Rochester, Minnesota, will deliver an address, "How Medicine Began."

All physicians in eastern Iowa and western Illinois are cordially invited to attend this program.

Deaths

JOSEPH GERHARD BEYKIRCH, JR., East St. Louis, Ill.; St. Louis University School of Medicine, 1914; a Fellow A. M. A.; past president of St. Clair County Medical Society; on the staffs of St. Mary's Hospital; aged 51; died, February 5, in the Good Samaritan Hospital, West Palm Beach, Fla., of myocarditis, nephrosclerosis and hypertension.

DAVID L. BLEY, Staunton, Ill.; Jefferson Medical College of Philadelphia, 1875; a member of the Illinois State Medical Society; aged 86; died February 16.

MAREVA DICKERMAN BROWN, De Kalb, Ill.; Bennett College of Eclectic Medicine and Surgery, Chicago, 1898; member of the Illinois State Medical Society; aged 77; was found dead, February 8.

EMIL ALBERT BUCHHOLZ, Mount Carmel, Ill.; Kentucky School of Medicine, Louisville, 1899; aged 76; died, Dec. 6, 1939.

WINFRED E. CONKLIN, Paris, Ill.; Hahnemann Medical College and Hospital, Chicago, 1902; aged 63; died February 15, in St. Anthony's Hospital, Terre Haute, Ind., of mesenteric thrombosis.

BERNARD FANTUS, a Fellow A. M. A.; distinguished as a leader in the field of therapy, died of myocarditis at the age of 65 at his home in Chicago, April 14.

He was born in Budapest, Hungary, Sept. 1, 1874. After preliminary study in Vienna he came to the United States, where he attended the University of Illinois School of Medicine and received his M.D. degree in 1899. He did graduate study in pharmacology at Strasbourg in 1906, at Berlin in 1909 and at the University of Michigan in 1917, from which he received the degree of master of science. He served as associate attending physician at the Cook County Hospital 1901-1902 and was in charge of the medical dispensary at the University of Illinois 1902-1913. From 1903 to 1924 he was professor of pharmacology and therapeutics at the University of Illinois School of Medicine and then taught as associate professor of medicine at Rush Medical College from 1924 to 1932. Since 1932 he had been professor of pharmacology, materia medica and therapeutics at the University of Illinois. He served also as professor of physiology at the College of Pharmacy of the University of Illinois from 1913 to 1917. Since 1930 he had been attending physician to the University Hospital and since 1934 director of therapeutics at the Cook County Hospital.

Dr. Fantus contributed widely to scientific medical literature and conducted numerous original investigations in the field of therapy. His research covered particularly such topics as the use of candy medication, the technic of medication and, more recently, the preservation of blood. In 1933 he was awarded the first honorary degree given by the American Therapeutic Society for his work in making medication more

palatable for children. The "blood bank" at the Cook County Hospital was established by him on March 15, 1937, and his plan of organization has been widely followed. Since 1918 he had been editor of the "Year Book of General Therapeutics." His contributions to medical literature include also "Prescription Writing," "Candy Medication," "Useful Cathartics" and "Technic of Medication" and many periodical articles.

For many years he contributed his time and his efforts toward the establishment of an area in Chicago surrounding the Cook County Hospital and the nearby medical schools and hospitals as a medical park. More recently he was chairman of the Committee on Spas of the American Medical Association. He was an indefatigable worker, a genial personality and an inspirational contributor in the field of therapeutics.

PAUL EBER NORMAN GREELEY, Waterman, Ill.; University of Michigan Homeopathic Medical School, Ann Arbor, 1900; Rush Medical College, Chicago, 1901; a Fellow, A.M.A.; past president of the DeKalb County Medical Society; medical director and owner of the East Side Hospital; aged 64; died, February 10, of coronary thrombosis.

SAMUEL HALEY, Joy, Ill.; Northwestern University Medical School, Chicago, 1896; aged 77, died, February 19.

BURT HORACE HARDINGER, Mattoon, Ill.; Rush Medical College, Chicago, 1916; a Fellow, A.M.A.; served during the World War; aged 47; on the staff of the Memorial Methodist Hospital, where he died, February 4, of diabetes mellitus.

PETER WILLIAM HOLLEMAN, Chicago; University of Michigan Department of Medicine and Surgery, Ann Arbor, 1889; on the staff of the Roseland Community Hospital; aged 79; died, February 8, of coronary occlusion.

IRVIN EVERETT HUSTON, Galva, Ill.; State University of Iowa College of Medicine, Iowa City; 1888; aged 80; died, February 11, at the Galesburg (Ill.) Cottage Hospital of pneumonia.

JAMES ALEXANDER HOUSTON, Oak Park, Ill.; Jenner Medical College, Chicago, 1904; aged 64; died, February 26, of coronary thrombosis.

LEON C. IVES, Peoria, Ill.; Chicago College of Medicine and Surgery, 1916; a Fellow, A.M.A.; served during the World War; aged 49; died, February 29, in the Proctor Hospital of gastric carcinoma.

HARRY W. KEATLEY, Rock Island, Ill.; Maryland Medical College, Baltimore, 1903; served during the World War; for many years connected with the United States Public Health Service; aged 59; died, February 9, in the Mercy Hospital, Davenport, Iowa, of a gunshot wound of the head.

RUDOLF KRONFELD, Chicago; Medizinische Fakultät der Universität Wien, Austria, 1926; member of the Illinois State Medical Society; also a dentist; professor of dental pathology at the Dental School of Loyola University; aged 38; died, February 13.

CHARLES LEROY LAMONT, West Frankfort, Ill.; National University of Arts and Sciences Medical Department, St. Louis, 1912; aged 59; died, Dec. 16, 1939.

THOMAS JOSEPH NEY, Chicago; Chicago Medical School, 1921; aged 45; died, February 5.

ALFRED ELLSWORTH OWENS, Princeton, Ill.; Chicago Medical College, 1883; member of the Illinois State Medical Society; on the staff of the Perry Memorial Hospital; aged 82; died January 21, in Moline of chronic myocarditis.

DAVID HARRY R. PATTON, Chicago; Baltimore Medical College, 1896; a Fellow, A.M.A.; on the staffs of the Illinois Masonic Hospital and the Woodlawn Hospital; aged 72; died, February 28, of myocarditis and coronary sclerosis.

BARLOW LLOYD PRICE, Palestine, Ill.; Chicago College of Medicine and Surgery, 1916; member of the Illinois State Medical Society; aged 50; died, January 10.

CHARLES WESLEY RACE, Chicago; Western Reserve University Medical Department, Cleveland, 1897; aged 66; died February 2, in St. Francis Hospital, Evanston, Ill., of arterio sclerosis and cerebral thrombosis.

NIKOLAOS SALOPOULOS, Chicago; National University of Athens School of Medicine, Greece, 1890; aged 74; died, February 2, in the Presbyterian Hospital of chronic myocarditis.

JOSEPH STEPHEN TERRANDO, La Salle, Ill; Regia Università degli Studi di Parma. Facoltà di Medicina e Chirurgia, Italy, 1903; a Fellow, A.M.A. aged 67; on the staff of St. Mary's Hospital, where he died, February 20, of coronary thrombosis.

MARVEL THOMAS, Gillespie, Ill.; Missouri Medical College, St. Louis, 1884; aged 84; died, February 16, of cerebral hemorrhage.

ALBERT L. TRABUE, Springfield, Ill.; Pulte Medical College, Cincinnati, 1881; aged 80; died, February 5, in St. John's Hospital.

SIDNEY D. WILGUS, Rockford, Ill.; University of Buffalo School of Medicine, 1895; a Fellow, A.M.A.; fellow of the American College of Physicians; member of the American Psychiatric Association and the Central Neuropsychiatric Association; past president of the Chicago Neurological Society; alienist for the department of welfare of Illinois from 1929 to 1933; chairman of the New York State Board of Alienists from 1904 to 1910; on the staff of St. Lawrence State Hospital, Ogdensburg, N. Y., 1895-1902; superintendent of the Elgin (Ill.) State Hospital, 1910-1911, and the Kankakee (Ill.) State Hospital from 1911 to 1913; on the staff of the Rockford General Hospital; founder of the Wilgus Sanitarium (Elmlawn) in 1913; on the staff of the Rockford Children's Home; veteran of the Spanish-American and World wars; aged 68; died, February 23, of coronary occlusion.

ALBERT WILBERFORCE WILLIAMS, Chicago; Northwestern University Medical School, Chicago, 1894; member of the Illinois State Medical Society; on the staff of the Provident Hospital; aged 78; died, February 26, of coronary thrombosis.